



**HOSPITAL AND MEDICAL FACILITIES SERIES**  
(Under the Hill-Burton Program)

regulations

# **PUBLIC HEALTH SERVICE REGULATIONS— PART 53**

## **Pertaining to Hospital and Medical Facilities Survey and Construction Legislation**

These regulations implement the provisions of Title VI of the Public Health Service Act, as amended

**U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE**  
Public Health Service  
Division of Hospital and Medical Facilities  
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<sup>1</sup> Sec. 53.1, Subparts B and C and Secs. 53.122 and 53.126 were amended and Subpart G was deleted Aug. 13, 1958, 23 FR 6200.

<sup>2</sup> Sec. 53.81 deleted Jan. 17, 1957, 22 FR 350.

<sup>3</sup> Subpart M (App. A) amended Nov. 16, 1957, 22 FR 9153; and further amended May 9, 1961, 26 FR 3994.

<sup>4</sup> Sec. 53.130 added Dec. 22, 1959, 24 FR 10408.

<sup>5</sup> Secs. 53.1, 53.31, 53.73, 53.78 and Subpart M (App. A) amended and Secs. 53.74 and 53.75 deleted Jan. 31, 1962, 27 FR 894.

<sup>6</sup> Secs. 53.51, 53.52, 53.74, 53.78, 53.145, 53.146, 53.147 amended Jan. 31, 1962, 27 FR 21.

<sup>7</sup> Sec. 53.12 amended June 9, 1962; 27 FR 112.

<sup>8</sup> Secs. 53.1, 53.11, 53.123, 53.134, 53.153, and 53.154 amended and Subpart N deleted July 2, 1963, 28 FR 6784.

## Subchapter D—Grants

### PART 53—

## GRANTS FOR SURVEY, PLANNING, AND CONSTRUCTION OF HOSPITALS AND MEDICAL FACILITIES

### SUBPART A—DEFINITIONS <sup>1</sup>

#### § 53.1 Definitions.

Except as otherwise stated, the following terms shall have the following meanings when used in the regulations in this part:

(a) *Area*. The geographic territory from which patients come or are expected to come to existing or proposed hospital or medical facilities, the delineation of which is based on such factors as population distribution, natural geographic boundaries, and transportation and trade patterns, and all parts of which are reasonably accessible to existing or proposed hospital or medical facilities. Nothing in the regulations in this part shall preclude the formation of an interstate area with the mutual agreement of the States concerned.

(b) *Base area*. Any area which is so designated by the State Agency and has or will have, in accordance with the State Plan, as a minimum, (1) a teaching hospital of a medical school, or (2) one general hospital with a capacity of 200 or more beds and which provides internships and residencies in two or more specialties. Such hospitals must be suitable for use as a base hospital in a coordinated hospital system within the State.

(c) *Intermediate area*. Any area so designated by the State Agency which has or will have, in accordance with the State Plan, as a minimum, one general hospital which has a capacity of 100 or more beds.

(d) *Rural area*. Any area so designated by the State Agency which constitutes a unit, no part of which has been included in a base or intermediate area.

(e) *Coordinated hospital system*. An inter-related network of general hospitals throughout a State in which the larger hospitals work with the smaller hospitals through an interchange of medical knowledge and personnel in order that rural and other small hospitals may have diagnostic, treatment, medical research and teaching services which cannot be provided by such hospitals individually.

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<sup>1</sup> Paragraphs (a), (b), (c), and (e) of Sec. 53.1 amended August 13, 1958, 23 FR 6200.

direction of persons licensed to practice medicine or surgery in the State. The term does not include hospitals primarily for the care of mentally ill or tuberculosis patients, nursing homes, and institutions the primary purpose of which is domiciliary care.

(i) *General hospital.* Any hospital for inpatient medical or surgical care of acute illness or injury and for obstetrics, of which not more than 50 percent of the total patient days during the year are customarily assignable to the following categories of cases: Chronic convalescent and rest, drug and alcoholic, epileptic, mentally deficient, mental, nervous and mental, and tuberculosis.

(j) *Mental hospital.* A hospital for the diagnosis and treatment of nervous and mental illness.<sup>3</sup>

(k) *Nonprofit hospital, nonprofit diagnostic or treatment center, nonprofit rehabilitation facility, and nonprofit nursing home.* Any hospital, diagnostic or treatment center, rehabilitation facility, or nursing home, as the case may be, owned and operated by one or more nonprofit corporations or associations, no part of the net earnings of which inures, or may lawfully inure, to the benefit of any private shareholder or individual.

(l) *Psychiatric hospital.* A type of mental hospital where patients may receive intensive treatment and where only a minimum of continued treatment facilities will be afforded.

(m) *Tuberculosis hospital.* A hospital for the diagnosis and treatment of tuberculosis excluding preventoria.

(n) *Hospital bed.* A bed for an adult or child patient. Bassinets for the newborn in a nursery, beds in labor rooms and in health centers, and other beds used exclusively for emergency purposes are not included in this definition.

(o) *Population.* In computing the population of the State or any area thereof, for purposes of the regulations in this part, the State agency shall use the latest figures of civilian population certified by the Federal Department of Commerce with such adjustments as may be

necessary to reflect changing local conditions. Such adjustments shall not result in any increase in the total population of the State over the figures certified by the Department of Commerce.

(p) *Public health center.* A publicly owned facility utilized by a local health unit for the provision of public health services, including related facilities such as laboratories, clinics, and administrative offices operated in connection with public health centers.

(q) *Local health unit.* A single county, city, county-city, or local district health unit, as well as a State health district unit where the primary function of the State district unit is the direct provision of public health services to the population under its jurisdiction.

(r) *Public health services.* Services provided through organized community effort in the endeavor to prevent disease, prolong life, and maintain a high degree of physical and mental efficiency. In addition to the services which the community already provides as a matter of practice, the term shall include such additional services as the community from time to time may deem it desirable to provide.

(s) *Diagnostic or treatment center.* A facility providing community service for the diagnosis or diagnosis and treatment of ambulatory patients, which is operated in connection with a hospital, or in which patient care is under the professional supervision of persons licensed to practice medicine or surgery in the State, or, in the case of dental diagnosis or treatment, under the professional supervision of persons licensed to practice dentistry in the State. This includes outpatient departments and clinics of public or nonprofit hospitals. The applicant must be either (1) a State, political subdivision, or public agency, or (2) a corporation or an association which owns and operates a nonprofit hospital.

(t) *Rehabilitation facility.*<sup>4</sup> (1) A facility providing community service which is operated for the primary purpose of assisting in the rehabilitation of disabled persons through an integrated program under competent professional supervision of (i) medical evaluation and services, and (ii) psychological, social, or vocational

<sup>3</sup> Sec. 53.1(j) revised January 23, 1953, 23 FR 442.

<sup>4</sup> Sec. 53.1(t) revised January 31, 1962, 27 FR 21.

evaluation and services. The major portion of the required evaluation and services must be furnished within the facility; and the facility must be operated either in connection with a hospital or as a facility in which all medical and related health services are prescribed by or are under the general direction of, persons licensed to practice medicine or surgery in the State.

(2) An integrated program brings together as a team specialized personnel from the (i) medical, and (ii) psychological, social, or vocational areas for the purpose of pooling information, interpretations and opinions for the development of a rehabilitation plan of services in which the disabled individual is viewed as a whole. When members of the team contribute to the diagnosis and treatment of illness, their contributions must be coordinated under medical responsibility. These integrated services may be provided in a facility to care for many types of disabilities or a single type of disability.

(3) A disabled person is an individual who has a physical or mental condition which, to a material degree, limits, contributes to limiting, or if not corrected, will probably result in limiting, the individual's performance or activities to the extent of constituting a substantial physical, mental, or vocational handicap.

(4) Medical service, in the case of a rehabilitation facility operated in connection with a hospital, means a designated medical director who renders direct personal supervision, varied and extensive availability of specialized consultants, a physical therapy department, an occupational therapy department, and medical evaluation.

(5) Medical service, in the case of a rehabilitation facility not operated in connection with a hospital, means medical supervision, availability by agreement of medical consultants, and evaluation and services suitable to the needs of the disabled persons to be served.

(6) Social service means evaluation and services by a qualified social worker in amounts and variety appropriate to the rehabilitation needs of the disabled persons to be served.

(7) Psychological service means evaluation and services by a qualified psychologist in amounts and variety appropriate to the rehabilitation needs of the disabled persons to be served.

(8) Vocational service, in the case of a re-

habilitation facility operated in connection with a hospital, means evaluation and services by a qualified vocational rehabilitation counselor in amounts and variety appropriate to the rehabilitation needs of the disabled persons to be served.

(9) Vocational service, in the case of a rehabilitation facility not operated in connection with a hospital, means those vocational services required in hospitals plus a variety of vocational services appropriate to the program and the persons to be served, such as prevocational exploration, work evaluation and vocational training.

(u) *Nursing home.* A facility which is operated in connection with a hospital, or in which nursing care and medical services are prescribed by or performed under the general direction of persons licensed to practice medicine or surgery in the State, for the accommodation of convalescents or other persons who are not acutely ill and not in need of hospital care, but who do require skilled nursing care and related medical services. The term "nursing home" shall be restricted to those facilities, the purpose of which is to provide skilled nursing care and related medical services for a period of not less than 24 hours per day to individuals admitted because of illness, disease, or physical or mental infirmity and which provide a community service.

(v) *Community service.* A facility provides a community service when (1) the services furnished are available to the general public or (2) admission is limited only on the bases of age, medical indigency, or medical or mental disability or, (3) the facility constitutes a medical or nursing care unit of a home or other institution which is available in accordance with subparagraph (1) or (2) of this paragraph.<sup>5</sup>

(w) *State.*<sup>6</sup> The 50 States, Puerto Rico, Guam, Virgin Islands, American Samoa, and the District of Columbia.

(Sec. 215, 58 Stat. 690, as amended; 42 U.S.C. 210. Interpret or apply sec. 631, 60 Stat. 1040, as amended; sec. 2011; 42 U.S.C. 2011)

<sup>5</sup> Sec. 53.1(v) revised January 23, 1958, 23 FR 442.

<sup>6</sup> Sec. 53.1(w) amended November 10, 1957, 22 FR 6153; December 22, 1959, 24 FR 10408; January 5, 1960, 25 FR 43; and July 2, 1963, 28 FR 6784.

## Sec. 53.1(x)

(x) *State agency.* As the context may require, the State agency designated by the State pursuant to sections 612 (a) (1), 623 (a) (1), 647 (a) (1), or 653 (a) (1), of the Federal act.

(y) *Surgeon General.* The Surgeon General of the Public Health Service.

(z) *Federal Act.* Title VI of the Public Health Service Act, as amended.

(aa) *Secretary.* The Secretary of Health, Education, and Welfare.

(Sec. 631, 60 Stat. 1040, as amended, sec. 654, 68 Stat. 463; 42 U.S.C. 2011, 201v)

## SUBPART B—DISTRIBUTION OF BEDS FOR ACUTE AND LONG-TERM ILLNESS (EXCLUDING MENTAL AND TUBERCULOSIS)<sup>7</sup>

### § 53.11 State allowance.

(a) The number of beds for acute and long-term illness required to provide adequate service to the people residing in any State shall be:

(1) For general hospitals,

(i) In States having 12 or more persons per square mile, 4.5 beds per thousand population;

(ii) In States having less than 12 and more than 6 persons per square mile, 5 beds per thousand population; and

(iii) In States having 6 persons or less per square mile, 5.5 beds per thousand population.

(2) For chronic disease hospitals, 2 beds per thousand population except as provided in subparagraph (3) of this paragraph.

(3) For nursing homes, 4.5 beds per thousand population, provided that the total number of nursing home beds and chronic disease beds shall not exceed 5 beds per thousand population.<sup>8</sup>

(b) If, in any area there are, as of the date of initial approval of the State plan, more general hospital beds than required by these standards, such excess (but no increase in such excess after such date) may be eliminated in calculating the maximum allowance for the State as a whole.

### § 53.12 Distribution.<sup>9</sup>

(a) The construction program under the State plan shall provide for the distribution of beds, within the allowances set forth in § 53.11, by one of the following methods:

(1) General hospital beds shall be distributed to the different areas of the State in such num-

bers as will meet the needs of each area, except that the number of beds allocated to any area shall not be less than 1.5 beds (existing and proposed) per thousand population. Nursing home beds and chronic disease hospital beds shall be distributed to the different areas of the State in such numbers as will meet the needs of each area for such beds, except that the total number of nursing home and chronic disease beds so allocated shall not be less than 1 bed (existing and proposed) per thousand population. If the State agency does not allocate all beds required under § 53.11 to specific areas, such unallocated beds shall be held in reserve for future distribution; or

(2) General hospital, chronic disease hospital, and nursing home beds shall be distributed to the different areas of the State in such numbers and combinations as will meet the general hospital, chronic disease hospital, and nursing home bed needs of each area except that the combination of such beds allocated to any area shall not be less than 2.5 beds (existing and proposed) per thousand population. If the State agency does not allocate all beds required under § 53.11 to specific areas, such unallocated beds shall be held in reserve for future allocation.

(b) The State agency shall set forth, in the State plan, the criteria utilized in allocating beds to areas.

### § 53.13 Beds classified as general hospital beds, chronic disease hospital beds, and nursing home beds.

(a) The count of existing general hospital beds shall include the beds in the hospitals of this category as defined in this subpart, which are not included in the count of beds for any

<sup>7</sup> Subpart B amended August 13, 1938, 23 FR 6200.

<sup>8</sup> Sec. 53.11 amended July 2, 1963, 28 FR 6784.

<sup>9</sup> Sec. 53.12 amended June 9, 1962, 27 FR 112.

other category under this part, and beds in any tuberculosis, mental, or chronic disease hospital which are specifically assigned for the care of general patients, except where the beds so assigned in any institution number less than ten.

(b) The count of existing chronic disease hospital beds and nursing home beds shall include the beds in facilities of those respective categories as defined in this subpart, which are not included in the count of beds for any other category under this part, and also beds in any general hospital which are in chronic disease and nursing home units, respectively, of a gen-

eral hospital, except where the beds in such units number less than 10 in each category.

(c) Beds in existing nursing homes which the State agency determines to be unsuitable in accordance with the objective criteria, relating to the physical structure, contained in the State plan shall be excluded from the count of beds for this category. In any event, beds in existing general hospitals, chronic disease hospitals, or nursing homes which the State agency has determined to be a public hazard shall be excluded from the count of beds of these respective categories.

## SUBPART C—DISTRIBUTION OF TUBERCULOSIS AND MENTAL HOSPITAL BEDS <sup>10</sup>

### § 53.21 State allowance.

(a) The number of beds required to provide adequate hospital services for tuberculosis patients and mental patients in any State shall be:

(1) For tuberculosis patients, 1.5 times the average number of active and probably active new cases of tuberculosis found annually during the latest two-year period for which data are available, as certified by the State Health Department: *Provided*, That the total number of beds so determined shall not exceed 2.5 times the annual deaths from tuberculosis in the State over the five-year period from 1940 to 1944. As used in this paragraph, the term "probably active" means the probable clinical status of the disease when activity has not been determined from adequate roentgenologic and laboratory examinations.

(2) For mental patients, 5 per thousand population.

(b) The count of existing tuberculosis and mental hospital beds shall include the beds in the hospitals of those respective categories, as defined in paragraph (a) of this section, which are not included in the count of beds for any other category under this part and also beds in any general hospital which are specifically assigned for the care of tuberculosis and mental patients, respectively, except where the beds so assigned in any institution number less than 10 in any category.

### § 53.22 Distribution.

(a) Whenever practicable, tuberculosis hospitals receiving grants under the Federal Act shall be built in centers of population and in proximity to general hospitals.

(b) Whenever practicable, mental hospitals receiving grants under the Federal Act shall be located in centers of population and in proximity to general hospitals.

## SUBPART D—DISTRIBUTION OF PUBLIC HEALTH CENTERS

### § 53.31 State allowance.

The number of public health centers in a State (counting those existing as well as those proposed) shall not exceed one per 30,000 State population, except in States having less than 12 persons per square mile the number shall not exceed one per 20,000 population. The follow-

ing shall be excluded from the count of public health centers:

(a) Existing facilities which the State agency, after consultation with the State health authority, has determined to be unsuitable for use as public health centers, and

(b) Auxiliary facilities such as laboratories and clinics, whether existing or proposed, and whether they are located within the same struc-

<sup>10</sup> Subpart C amended August 13, 1958, 23 FR 6200



ture as the health department office or in a separate structure.

**§ 53.32 Distribution.**

The general method of distribution of public health centers throughout the State shall con-

form to the plan of organization of local health units within the State. In instances where the State Health Department is not the State agency designated under section 623 (a) (1) of the Federal Act, the method of distribution shall be determined after consultation with the State health authority.

**SUBPART E—DISTRIBUTION OF DIAGNOSTIC OR TREATMENT CENTERS**

**§ 53.41 State allowance.**

Diagnostic or treatment centers shall be planned in sufficient number to make at least the basic minimum services readily available to all persons in the State, provided that the total number of diagnostic or treatment centers in the State (counting those existing as well as those proposed) shall not exceed one per 10,000 State population. The basic minimum services are clinical laboratory and diagnostic X-ray. The count of existing diagnostic or treatment centers shall exclude:

(a) Offices of private physicians and dentists, whether for individual or group practice;

(b) Industrial clinics for employees only, first aid clinics, and similar facilities not furnishing a community service;

(c) Any diagnostic or treatment center which the State agency determines to be unsuitable in accordance with the objective criteria contained in the State plan. A diagnostic or treatment center shall in any event be regarded as unsuitable if it constitutes a public hazard.

**§ 53.42 Distribution.**

(a) In determining the need for additional diagnostic or treatment services in a community as a basis for distribution of diagnostic or treatment centers, consideration shall be given to any such services provided by private physicians and dentists.

(b) Whenever practicable, diagnostic or treatment centers shall be coordinated with existing or proposed hospitals.

**SUBPART F—DISTRIBUTION OF REHABILITATION FACILITIES <sup>11</sup>**

**§ 53.12 State allowance.**

(a) Rehabilitation facilities shall be planned by each State so that all persons in the State shall have access to integrated rehabilitation services for all types of disabilities. The facility or facilities may be programmed in the State or by joint planning with one or more other States to service the residents of such States. In determining the number of rehabilitation facilities and services needed, the State shall consider such factors as the particular needs of the population to be served and the scope of services and organizational makeup of the facility proposed. The total number of rehabilitation facilities (including those existing and proposed) for purposes of the Federal Act may not exceed one per 75,000 State population.

(b) The count of existing rehabilitation facilities shall exclude those which the State agency has determined to be unsuitable in accordance with the objective criteria contained in the State plan. In any event, a rehabilitation facility shall be regarded as unsuitable if it constitutes a public hazard. Only those existing facilities that meet the definition of § 53.1(t) will be charged against the State allowance.

**§ 53.52 Distribution.**

In determining the need for additional rehabilitation services as a basis for distribution of rehabilitation facilities, consideration shall be given to (a) rehabilitation services provided in existing facilities, avoiding duplication and overlapping of services and (b) availability of rehabilitation services to all geographical areas.

<sup>11</sup> Subpart F amended Jan. 31, 1962, 27 FR 21.

SUBPART H—PRIORITY OF PROJECTS <sup>12,13</sup>**§ 53.71 Manner of determination.**

(a) The general manner in which the State agency shall determine the priority of projects included in the State construction program shall conform with the principles set out in this subpart.

(b) In determining the relative priority of projects, special consideration shall be given to those projects providing services to persons located in rural communities and communities with relatively small financial resources.

**§ 53.72 Balance among categories of hospital facilities.**

Insofar as practicable, the State agency shall develop the construction program under Part C in relation to the proportionate need for each of the five categories of hospital facilities (general, mental, tuberculosis, chronic, and health centers). In determining proportionate needs, consideration shall be given to existing hospital facilities and those under construction without assistance under the Federal Act.

**§ 53.74 Hospitals (excluding public health centers).**

The priority of hospital projects shall be determined after consideration of the relative need for beds in the area in which the project will be located, the utilization of existing hospital beds in the area, and the extent to which beds will be made available for groups of the population which for any reason are less adequately served than other groups of the population. The adequacy of service facilities and service areas in existing hospitals may be utilized as an additional factor in establishing priority, in accordance with applicable objective criteria established in the construction program. In establishing the priority of chronic disease projects, special consideration shall be given to projects in which the chronic disease facilities will be operated as subunits of general hospitals.

**§ 53.76 Public health centers.**

Highest priority in this category shall be given to the provision of facilities for local health units serving rural communities and com-

munities with relatively small financial resources. Where the agency designated to administer the State plan is not the State health authority, the State agency shall determine the relative priorities to be established after consultation with the State health authority.

**§ 53.77 Diagnostic or treatment centers.**

The priority of diagnostic or treatment center projects shall be determined after consideration of the following factors in the order of importance as given:

(a) The relative need for additional diagnostic or treatment services in the community or communities to be served by the project taking into account existing available services;

(b) The extent to which diagnostic and treatment services will be made available to groups of the population which for any reason are less adequately served than other groups of the population.

**§ 53.78 Rehabilitation facilities.**

Priority shall be given to rehabilitation facility projects in the order of importance as given below taking into consideration existing rehabilitation services in the community, the need for additional services in the community, and the extent to which rehabilitation services will be made available to groups of the population which for any reason are less adequately served than other groups of the population:

(a) Facilities offering for multiple disabilities, medical, psychological, social, and vocational services located in universities having a medical school, teaching hospital, school of social work, department of psychology, vocational rehabilitation counselor training course, school of physical therapy, and school of occupational therapy, or a major portion of these.

(b) Facilities offering rehabilitation services for multiple disabilities in hospitals and medical facilities capable of sustaining an organized department of physical medicine and rehabilitation.

(c) All other rehabilitation facilities.

<sup>13</sup> Secs. 53.73 and 53.75 deleted Jan. 31, 1962, 27 FR 804; Sec. 53.78 amended Jan. 31, 1962, 27 FR 21; and Sec. 53.81 deleted Jan. 17, 1957, 22 FR 350.

<sup>12</sup> Subpart G deleted August 13, 1958, 23 FR 6200.

**§ 53.79 Nursing homes.**

(a) The priority of nursing home projects shall be determined after consideration of the following factors in the order of importance as given:

(1) Relative need for additional nursing home beds in the community or communities to be served by the project taking into account the utilization of existing suitable beds;

(2) The extent to which beds will be made available to groups of the population which for

any reason are less adequately served than other groups of the population.

(b) Special consideration shall be given to nursing home projects operated by hospitals

**§ 53.80 Size and character.**

Insofar as practicable and without affecting the priority of facilities serving rural communities and areas with relatively small financial resources, special consideration shall be given to applications for construction of projects of a size and character consistent with efficient and economical operation.

**SUBPART I—FLEXIBILITY OF ALLOTMENTS AND TRANSFER OF STATE ALLOTMENTS**

**§ 53.91 Flexibility of allotments.**

At any time subsequent to 30 days after January 12, 1955, and, thereafter, 30 days after the allotments are made for any fiscal year under Part G, a State may submit a request in writing to the Surgeon General that its allotment or a specified portion thereof for diagnostic or treatment centers, for chronic disease hospitals, or for nursing homes, be added to the allotment for one or both of the other categories. If such request is accompanied by a certification by the State agency (a) that it has afforded a reasonable opportunity to prospective project applicants to make applications for the utilization of funds in the specific category for which such funds were originally allotted and (b) that there have been no approvable applications for the funds sought to be transferred to the other category or categories, the Surgeon General will adjust the allotments in accordance with such request and notify the State agency.

(Sec. 654, 68 Stat. 403; 42 U.S.C. 201v)

**§ 53.92 Transfer of State allotments.<sup>14</sup>**

A State may submit a request in writing to the Surgeon General that its allotment or a specified portion thereof under Part C or Part

G of the Federal Act for any type of facility be added to the corresponding allotment of another State for the purpose of meeting a portion of the Federal share of the cost of a project for the construction of a facility of the type authorized under the allotment in such other State. Upon a finding by the Surgeon General in the case of a hospital, hospital for the chronically ill and impaired, diagnostic or treatment center, or nursing home, or upon a finding by the Surgeon General and the Secretary in the case of a rehabilitation facility (a) that construction of that facility with respect to which the request is made will meet needs of the State making the request, and (b) that use of the specified portion of such State's allotment, as requested by the State, will assist in carrying out the purposes of Part C or Part G of the Federal Act, then the requested portion of the allotment will be transferred and added to the corresponding allotment of the other State to be used for the purposes of paying part of the Federal share of the cost of constructing the facility with respect to which the request is made.

(Sec. 215, 58 Stat. 600, as amended; 42 U.S.C. 210. Interpret or apply sec. 637, P. L. 86-158; 73 Stat. 349)

**SUBPART J—GENERAL STANDARDS OF CONSTRUCTION AND EQUIPMENT**

**§ 53.101 General.**

(a) Plans and specifications for each project submitted to the Surgeon General for approval,

<sup>14</sup> Sec. 53.92 amended December 22, 1959, 24 FR 10408.

and in the case of rehabilitation facilities, the approval of the Secretary, under the Federal Act shall be prepared in accordance with "General Standards of Construction and Equipment" for facilities of different classes and in

different types of locations as prescribed by the Surgeon General set forth in Subpart M of this part. The Surgeon General may approve, subject also in the case of rehabilitation facilities to the approval of the Secretary, plans and specifications which contain deviations from the requirements prescribed, if he is satisfied that the purposes of such requirements have been fulfilled.

(b) The design and construction covered by the plans and specifications must conform with the applicable State and local laws, codes, and ordinances and with the approved State plan. The plans and specifications must be complete and adequate for contract purposes and have the approval and recommendation of the State agency.

(c) Equipment shall be provided in the kind and to the extent necessary for the proper functioning of the facility as planned.

**§ 53.102 Size of mental and psychiatric hospitals.**

No application for construction of a psychiatric hospital with a capacity of more than 500

beds or of a mental hospital with a capacity of more than 3,000 beds shall be approved. This requirement shall not be construed to prevent approval of applications for improvements of psychiatric and mental hospitals with bed capacities equal to or greater than those specified above, if such improvements are designed to provide more intensive treatment facilities within such hospitals.

**§ 53.103 Size of tuberculosis hospitals.**

No application for construction of a tuberculosis hospital with a capacity of less than 100 beds shall be approved, except that an application for construction of a tuberculosis hospital with a capacity from 50 to 100 beds may be approved where necessary (a) to provide facilities for an isolated area too small to support a larger hospital, or (b) to expand, remodel, or alter existing hospital facilities.

**§ 53.104 Size of nursing homes.**

No application shall be approved for construction of a nursing home, not an addition to a hospital, with a capacity of less than 10 beds.

**SUBPART K—NONDISCRIMINATION AND SERVICES FOR PERSONS UNABLE TO PAY THEREFOR**

**§ 53.111 General.**

The State plan shall provide for adequate hospital, diagnostic or treatment center, rehabilitation facility, and nursing home service for the people residing in a State without discrimination on account of race, creed, or color, and shall provide for adequate facilities of these types for persons unable to pay therefor.

**§ 53.112 Nondiscrimination.**

Before a construction application is recommended by a State agency for approval, the State agency shall obtain assurance from the applicant that the facilities to be built with aid under the Act will be made available without discrimination on account of race, creed, or color, to all persons residing in the area to be served by that facility. However, in any area where separate hospital, diagnostic or treat-

ment center, rehabilitation or nursing home facilities, are provided for separate population groups, the State agency may waive the requirement of assurance from the construction applicant if (a) it finds that the plan otherwise makes equitable provision on the basis of need for facilities and services of like quality for each such population group in the area, and (b) such finding is subsequently approved by the Surgeon General. Facilities provided under the Federal Act will be considered as making equitable provision for separate population groups when the facilities to be built for the group less well provided for heretofore are equal to the proportion of such group in the total population of the area, except that the State plan shall not program facilities for a separate population group for construction beyond the level of adequacy for such group.

**§ 53.113 Hospital, diagnostic or treatment center, rehabilitation facility, and nursing home service for persons unable to pay therefor.**

Before a construction application is recommended by a State agency for approval, the State agency shall obtain assurance that the applicant will furnish a reasonable volume of free patient care. As used in this section, "free patient care" means hospital, diagnostic or treatment center, rehabilitation facility, or nursing home service offered below cost or free to persons unable to pay therefor, including under "persons unable to pay therefor", both the legally indigent and persons who are otherwise self-supporting but are unable to pay the full cost of needed care. Such care may be

paid for wholly or partly out of public funds or contributions of individuals and private and charitable organizations such as community chests or may be contributed at the expense of the hospital itself. In determining what constitutes a reasonable volume of free patient care, there shall be considered conditions in the area to be served by the applicant, including the amount of free care that may be available otherwise than through the applicant. The requirement of assurance from the applicant may be waived if the applicant demonstrates to the satisfaction of the State agency, subject to subsequent approval by the Surgeon General, that furnishing such free patient care is not feasible financially.

**SUBPART L—METHODS OF ADMINISTRATION OF THE STATE PLAN**

**§ 53.121 General.**

The State plan shall provide for general methods of administration which are in accord with the principles set out in §§ 53.122 to 53.128.

**§ 53.122 Construction program.<sup>15</sup>**

The State hospital, diagnostic or treatment center, rehabilitation facility, and nursing home construction program shall be developed in the following manner:

(a) The State agency shall determine need for hospital facilities of all types, health center facilities, diagnostic or treatment centers, rehabilitation facilities, and nursing homes by applying the ratios heretofore specified and deducting existing facilities, except those justifying replacement under priority regulations.

(b) The State agency shall determine through field investigation, and otherwise, the approximate locations within each area at which needed hospital beds or health centers should most appropriately be built and the approximate locations at which needed diagnostic or treatment centers, rehabilitation facilities and nursing homes should be constructed.

(c) After having determined hospital, public health center, diagnostic or treatment center, rehabilitation facility, and nursing home needs, the State agency shall establish an over-all construction program. This program shall set forth all such needs in accordance with the

standards specified in §§ 53.11, 53.21, 53.31, 53.41 and 53.51 and shall show the relative need for each project included, irrespective of the availability of funds for construction and for maintenance and operation.

(d) The State agency shall from time to time as necessary review the over-all hospital, public health center, diagnostic or treatment center, rehabilitation facility, and nursing home construction program. Annually the State agency shall submit to the Surgeon General a report which contains such revisions of the construction program as the State agency considers necessary to administer the annual allotment for each category of facilities. At least biennially the report shall contain, as a minimum, a complete construction program, revised as necessary.

(e) The State agency shall establish a separate construction schedule on such forms and for such periods as the Surgeon General may prescribe. Insofar as funds are available for construction and for maintenance and operation, construction shall be scheduled in the order of relative need.

(Sec. 623, 60 Stat. 1043, as amended; 42 U.S.C. 201f)

**§ 53.123 Personnel administration.**

(a) *Merit system.* A system of personnel ad-

<sup>15</sup> Paragraphs (c) and (d) of Sec. 53.122 amended August 13, 1958, 23 FR 6200.

ministration on a merit basis shall be established and maintained with respect to the personnel employed in the administration of the State plan. Such a system shall include provision for:

(1) Impartial administration of the merit system;

(2) Operation on the basis of published rules or regulations;

(3) Classification of all positions on the basis of duties and responsibilities and establishment of qualifications necessary for the satisfactory performance of such duties and responsibilities;

(4) Establishment of compensation schedules adjusted to the responsibility and difficulty of the work;

(5) Selection of permanent appointees on the basis of examinations so constructed as to provide a genuine test of qualifications and so conducted as to afford all qualified applicants opportunity to compete;

(6) Advancement on the basis of capacity and meritorious service; and

(7) Tenure of permanent employees. Substantial compliance with the Standards for a Merit System of Personnel Administration, issued by the Secretary of Health, Education, and Welfare, the Secretary of Labor, and the Secretary of Defense on January 26, 1963, 28 FR 734, including any subsequent amendments thereof, will be deemed to meet the requirements of the regulations in this part.<sup>16</sup>

(b) *Conflict of interest.* No full-time officer or employee of the State agency, or any firm, organization, corporation, or partnership which such officer or employee owns, controls, or directs, shall receive funds from the applicant, directly or indirectly, in payment for services provided in connection with the planning, design, construction or equipping of the project.<sup>17</sup>

(Sec. 215, 58 Stat. 690, as amended; 42 U.S.C. 210. Interpret or apply sec. 622, 60 Stat. 1042, sec. 623, 60 Stat. 1043, as amended; 42 U.S.C. 201f)

#### § 53.124 Fair hearings.

The State agency shall establish such rules and regulations as will provide an opportunity for an appeal to and a fair hearing before the

State agency to every applicant for a construction project who is dissatisfied with any action of the State agency regarding its application. (Sec. 623, 60 Stat. 1043, as amended; 42 U.S.C. 201f)

#### § 53.125 Construction standards.

The State agency shall adopt general standards of construction and equipment for the various types of hospitals, public health centers, diagnostic or treatment centers, rehabilitation facilities, and nursing homes assisted under this program. The standards adopted shall not be less than the general standards prescribed by the Surgeon General and set forth in Subpart M of this part.

#### § 53.126 Publicizing the State plan.<sup>18</sup>

At least 30 days prior to the submission of the report required in § 53.122(d) to the Surgeon General, the State agency shall publish in newspapers having general circulation throughout the State a general description of the proposed revision of the construction program, and the State plan shall be available for examination and comment by interested persons prior to submission to the Surgeon General.

(Sec. 215, 58 Stat. 690, as amended; 42 U.S.C. 210. Interpret or apply sec. 622, 60 Stat. 1042, sec. 653, 68 Stat. 463; 42 U.S.C. 201e, 201u)

#### § 53.127 Processing construction applications.

(a) *Form of application.* Construction applications, including a detailed estimate of the cost of the project, shall be submitted to the Surgeon General through the State agency and shall be executed on forms prescribed by the Surgeon General.

(b) *Order of processing applications.* The State agency shall process applications received in the order of priority, except that the State agency may approve, recommend and forward to the Surgeon General applications out of the order of priority if:

(1) The State agency has afforded reasonable opportunity for development and presentation of projects in the order of priority, and

<sup>16</sup> Paragraph (a) of Sec. 53.123 amended July 2, 1963, 28 FR 6784.

<sup>17</sup> Sec. 53.123(b) added December 22, 1959, 24 FR 10408.

<sup>18</sup> Sec. 53.126 revised January 17, 1957, 22 FR 850, and further amended August 13, 1958, 23 FR 6201.



(2) If the State agency certifies to the Surgeon General that financial resources for the construction, maintenance and operation of projects of higher priority are not then available.

The priority of a project under the State plan shall not be affected by the fact that other projects of lower priority have previously been approved and recommended by the State agency.

(c) *Assurances from applicant.* In addition to assurance otherwise required by the State agency, before approving an application, the State agency must have assurance from the applicant:

(1) That actual construction work will be performed by the lump sum (fixed price) contract method, that adequate methods of obtaining competitive bidding will be or have been employed prior to awarding the construction contract, either by public advertising or circularizing three or more bidders, and that the award of the contract will be or has been made to the responsible bidder submitting the lowest acceptable bid: *Provided, however,* That the purchase and installation of equipment which is unique to a hospital, diagnostic or treatment center, rehabilitation facility, or nursing home, as well as kitchen, laundry, laboratory, and pharmacy equipment, need not be considered construction work for the purpose of this section, except that if open competitive bidding is employed to obtain any or all of these items, the award shall be made to the responsible bidder submitting the lowest acceptable bid.

(2) That section 2, Labor Standards (PHS Form 144 as revised) will be included in all construction contracts in excess of \$2,000. That construction contracts in excess of \$2,000 will prescribe the minimum rates of pay for laborers and mechanics engaged in the construction of the project as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, 49 Stat. 1011, as amended, and the regulations issued pursuant thereto by the Secretary of Labor;

(3) That all construction contracts regardless of amount will include paragraph 8, Section 2, Labor Standards (PHS Form 144 as revised), relating to kickbacks;

(4) That the project will not be advertised or

placed on the market for bidding until the final working drawings and specifications have been approved by the Surgeon General and the applicant has been so notified;

(5) That no construction contract or contracts for the project or a part thereof, the cost of which is in excess of the estimated cost approved in the application for that portion of the work covered by the plans and specifications, will be entered into without the prior approval of the Surgeon General;

(6) That the construction contract will require the contractor to furnish performance and payment bonds, the amount of which shall each be in an amount not less than fifty per centum (50%) of the contract price, and to maintain during the life of the contract adequate fire, workmen's compensation, public liability and property damage insurance;

(7) That any change or changes in the contract which (i) makes any major alteration in the work required by the plans and specifications, or (ii) raises the total contract price over the approved estimate of cost of the work covered by the plans and specifications will be submitted to the Surgeon General for prior approval;

(8) That the construction contract will provide that the Surgeon General, the State agency and their representatives will have access at all times to the work wherever it is in preparation or progress and that the contractor will provide proper facilities for such access and inspection;

(9) That the applicant will provide and maintain competent and adequate architectural or engineering supervision and inspection at the project to insure that the completed work conforms with the approved plans and specifications; and

(10) That a hospital, when completed, will be operated and maintained in accordance with minimum standards prescribed by the State agency for the maintenance and operation of hospitals aided under the Federal Act; that a diagnostic or treatment center, rehabilitation facility, or nursing home, when completed, will be operated and maintained in accordance with standards of maintenance and operation, if any, as prescribed by the State for such facilities. *Provided,* That except with respect to subpara-

graph (1) of this paragraph, the State agency, subject to the approval of the Surgeon General, may approve modifications of the assurances required under this paragraph or waive technical compliance with any of the requirements of such assurances, if it finds that the purpose of such assurances and requirements is fulfilled.

(d) *Certification to the Surgeon General.* After the State agency has approved a construction application, it shall recommend it to the Surgeon General for approval and shall certify:

(1) That the application contains reasonable assurance as to title, payment of prevailing rates of wages, and financial support for the non-Federal share of the cost of construction and the entire cost of maintenance and operation when completed;

(i) Availability of funds for the non-Federal share of construction costs shall mean (a) funds immediately available, placed in escrow, or acceptably pledged, or (b) funds or fund sources specifically earmarked in a sum sufficient for that purpose or (c) other assurances acceptable to the Surgeon General.

(ii) To assure the availability of funds for maintenance and operation, the application for the construction of a new project must include a proposed operating budget, on a form prescribed by the Surgeon General, for the two-year period immediately following its completion. In the case of an addition to an existing facility, the application must include a statement showing that funds are or will be available to meet the difference between proposed expenditures and anticipated income from the operation of the constructed addition for the two-year period immediately following its completion.

(2) That the plans and specifications are in accord with Subpart M of this part;

(3) That the application is in conformity with the State plan approved by the Surgeon General and contains an assurance that the applicant will conform to the applicable requirements of the plan;

(4) That the application contains an assurance that the applicant will conform to the requirements of §§ 53.111, 53.112, and 53.113 regarding the provision of facilities without discrimination on account of race, creed, or color,

and for furnishing needed hospital facilities for persons unable to pay therefor;

(5) That the application contains an assurance that the applicant will conform to State standards for operation and maintenance and to all applicable State laws and State and local codes, regulations, and ordinances;

(6) That the application is entitled to priority over other projects within the State and that in making this determination the State agency has complied with paragraph (b) of this section; and

(7) That the State agency has approved the application.

(e) *Amendments to application.* An amendment to any application approved by the Surgeon General shall be processed in the same manner as an original application, except that the original application's conformity with priority regulations shall suffice for the amendment. Minor changes not provided for under paragraph (c)(7) of this section are not considered amendments.

(Sec. 625, 60 Stat. 1045, as amended, sec. 654, 68 Stat. 463; 42 U.S.C. 201h, 201v)

#### § 53.128 Requests for construction payments.

(a) *Certification by State agency.* The State agency shall certify to the Surgeon General the amount of payments due to an applicant for the cost of work performed and materials and equipment furnished.

(1) Requests for payment under the construction contract shall be submitted in each of three stages, as follows:

(i) The first installment when not less than 25 percent of the work of construction of the building has been completed,

(ii) The second installment when the mechanical work has been substantially roughed in, and

(iii) The third installment when work under the construction contract is completed and final inspection made.

(2) Requests for payment of the Federal share of other allowable costs such as architect's fee, inspection cost, and cost of equipment shall be included in requests for payments made at one or more of the stages indicated in this paragraph.



(3) All costs that have been determined at the time the third payment for work performed under the construction contract is requested shall form the basis of a request for final payment of the Federal share of the entire project.

(4) With the consent of the Surgeon General, the State agency may adopt a different schedule of payments, but in no case shall such payments be less frequent than those scheduled in this paragraph.

(b) *Inspection by State agency.* As a basis for certification by the State agency that payment of an installment is due an applicant, the State agency, without expense to the Federal Government, shall make adequate inspections to determine that the work has been performed upon a project, or purchases have been made, in accordance with the approved plans and specifications.

(Sec. 625, 60 Stat. 1045, as amended, sec. 654, 68 Stat. 463; 42 U.S.C. 291b, 291v)

**§ 53.129 Fiscal and accounting requirements.**

(a) *Construction allotments.* (1) The State agency shall be responsible for establishing and maintaining accounts and fiscal controls of all Federal and State funds allotted for construction projects. Federal and State funds shall be separately identified by maintaining separate fund accounts for this purpose.

(2) The fiscal records shall be so designed as to show at any given time the Federal funds allotted, encumbered, and unencumbered balances. If State contributions are made for construction, separate accounts, reflecting similar information, shall be maintained for State funds.

(b) *Construction payments.* (1) Where the State may receive Federal funds for applicants

for construction project grants, or the State itself is an applicant, adequate records of account and fiscal controls shall be established and maintained by the State to assure proper accounting of all funds received and disbursed. Similar suitable accounts shall be maintained to show the receipt and disbursement of State, local or other funds used for matching purposes.

(2) The State agency shall require that applicants receiving Federal funds establish and maintain adequate accounting and fiscal records to reflect the receipt and expenditure of funds allotted and paid for construction projects.

(3) The States which by law are authorized to make payments to applicants shall promptly pay such applicants funds certified for payment by the Surgeon General for approved construction projects.

**§ 53.130 Change of status of facility.<sup>19</sup>**

The State agency shall promptly notify the Surgeon General in writing, if at any time within 20 years after the completion of construction, any hospital, diagnostic or treatment center, rehabilitation facility, or nursing home which received funds under Part C or Part G of the Federal Act is transferred to any person, agency, or organization not qualified to file an application under the Act or not approved as a transferee by the State agency; or, ceases to be a nonprofit hospital, nonprofit diagnostic or treatment center, nonprofit rehabilitation facility, or nonprofit nursing home as defined in the Federal Act.

(Sec. 215, 58 Stat. 690, as amended; 42 U.S.C. 216. Interpret or apply sec. 622, 60 Stat. 1042; 42 U.S.C. 291e)

<sup>19</sup> Sec. 53.130 added December 22, 1959, 24 FR 10408.

## SUBPART M—(APPENDIX A) GENERAL STANDARDS OF CONSTRUCTION AND EQUIPMENT

### § 53.131 Introduction.

(a) The standards set forth in this subpart have been established by the Surgeon General of the U.S. Public Health Service as required by Title VI of the Public Health Service Act. These standards constitute minimum requirements for construction and equipment and shall apply to all projects for which Federal assistance is requested under the act. They are considered necessary to insure properly planned and well constructed hospitals and public health centers which can be maintained and efficiently operated to furnish adequate services.

(b) Throughout these general standards reference is made to certain sizes of hospitals such as, "up to and including 100 beds," "over 100 beds," etc. These references are not meant to be applied strictly. They indicate the approximate sizes at which certain changes in requirements will occur.

(c) It should be particularly noted that the small hospital of 50 beds or under presents a special problem. The size of the various departments will be generally smaller and will depend upon the requirements of the particular hospital. Some of the functions allotted separate spaces or rooms in these general standards may be combined provided that the resulting plan will not compromise the best standards of medical and nursing practice. In other respects the general standards set forth in this subpart, including the area requirements, will apply.

(d) In the case of types of hospitals not specifically treated herein the standards for general hospitals will apply. Due allowance will be made for the specialized or unusual requirements of the particular hospital involved.

(e) Since these are minimum requirements it is desirable only that they form a basis for development of higher standards. In the interest of promoting the development of higher standards it is the intention of the Public Health Service to make suggestions and disseminate the latest information as to current good practice in planning and design of health facilities. This information will be distributed from time to time to State agencies and other interested persons.

(f) No attempt has been made in establishing these standards to comply with all the various State and local codes and regulations which, of course, must be observed. The standards set forth in this subpart must be followed where they exceed any State and local codes and regulations. Likewise, compliance is required with minimum standards of construction and equipment promulgated by the State Agency where such requirements provide a higher standard than the standards set forth in this subpart.

### § 53.132 Site survey and soil investigation.

(a) The applicant shall provide for a survey and soil investigation of the site and furnish a plat of the site. The purpose of this survey and soil investigation is to obtain all information necessary for the design of the building foundations and mechanical service connections and development of the site. It is suggested that this matter be deferred until the architect has been selected in order that he may cooperate with the engineer who obtains the data.

(b) If any existing structures or improvements on the site are to be removed by the owners or others, the buildings or improvements must be so designated on the plat.

(c) Any discrepancies between the survey and the recorded legal description shall be reconciled or explained.

(d) The plat shall indicate:

(1) The courses and distances of property lines.

(2) Dimensions and location of any buildings, structures, easements, rights-of-way or encroachments on the site.

(3) Details of party walls, or walls and foundations adjacent to the lot lines.

(4) The position, dimensions and elevations of all cellars, excavations, wells, back-filled areas, etc., and the elevation of any water therein.

(5) All trees which may be affected by the building operations.

(6) Detailed information relative to established curb and building lines and street, alley, sidewalk and curb grades at or adjacent to the

site and the materials of which they are constructed.

(7) All utility services and the size, characteristics, etc., of these services.

(8) The location of all piping, mains, sewers, poles, wires, hydrants, manholes, etc., upon, over or under the site or adjacent to the site if within the limits of the survey.

(9) Complete information as to the disposal of sanitary, storm water and subsoil drainage and suitability of subsoil for rainwater or sanitary disposal purposes if dry wells are used.

(10) Official datum upon which elevations are based and a bench mark established on or adjacent to the site.

(11) Elevations on a grid system of not more than 20-foot intervals to indicate changes of slope, etc., over that portion of the site to be developed.

(12) Elevations of contours, bottoms of excavations, etc.

(13) Contemplated date and description of any proposed improvements to approaches or utilities adjacent to the site.

(e) The plat shall bear a certification by the city engineer or other qualified official, that the true street lines and the officially established grades of curbs, sidewalks and sewers are correctly given.

(f) Adequate investigation shall be made to determine the sub-soil conditions. The investigations shall include a sufficient number of test pits or test borings as will determine, in the judgment of the architect, the true conditions.

(g) Samples of strata of soil or rock taken in each pit or boring shall be retained in suitable containers. Each sample container shall be identified as to the boring and elevations at which taken and the labels initialed by the engineer making the soil investigation.

The following information shall be noted

consistency, character, and bearing value of the various

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(3) The elevation of rock, if known, and the probability of encountering quicksand.

(4) Average depth of frost effect below surface of ground.

(5) High and low water levels of nearby bodies of water affecting the ground water level.

(6) The probability of freshets overrunning the site.

(7) Whether the soil contains alkali in sufficient quantities to affect concrete foundations.

(8) The elevation and location of the top of workings relative to the site, if the site is underlaid with mines, or old workings are located in the vicinity.

(9) Whether the site is subject to mineral rights which have not been developed.

#### § 53.133 Site.

(a) The site of any hospital should be reasonably accessible to the center of community activities. Public transportation should be available within a reasonable distance, especially if an out-patient service is to be maintained.

(b) Hospitals should be located in relation to the center of population, close to where patients live and where competent special medical and surgical consultation is readily available and where employees can be recruited and retained.

(c) The site should not be near insect breeding areas, noise or other nuisance producing industrial developments; airports, railways or highways producing noise or air pollution, or near penal or other objectionable institutions or near a cemetery.

(d) Adequate roads and walks shall be provided within the lot lines to the main entrance, ambulance entrance and community activities.

(e) The site for a public health center should be convenient to the center of community activities.

#### § 53.134 General hospital.

Units required in the general hospital:

(a) *Administration department.*

Up to and including 100 beds:

Business office with information counter.

PBX Board and night information.<sup>1</sup>

Administrator's office.

Director of nurses' office.<sup>1</sup>

Medical record room.

Staff lounge.

<sup>1</sup> Desirable but not mandatory.

Lobby.  
Public toilets.

Over 100 beds:

Business office.  
Information counter.  
PBX Board and night information.<sup>1</sup>  
Administrator's office.  
Director of nurses' office.  
Admitting office.  
Medical social service room.<sup>1</sup>  
Medical record room (should be easily available to O.P.D.).  
Staff lounge.  
Library, conference and board room.  
Lobby.  
Retiring room.<sup>1</sup>  
Public toilets.

(b) *Adjunct diagnostic and treatment facilities.* Except for the morgue and autopsy, this department preferably should be located convenient to both in- and out-patients.

Laboratory:

Adequate facilities for chemical, bacteriological, serological, pathological and hematological services.

Basal metabolism and electrocardiography:

Up to and including 100 beds; No special provisions required. Can be done in bed rooms.

Over 100 beds: One room near the laboratory.

Morgue and autopsy: <sup>1</sup> May not be required in hospitals under 50 beds if other facilities such as undertaker or coroner are available. Where provided: Combination morgue and autopsy with mortuary refrigerator.

Radiology: Each hospital to have at least 1 radiographic room with adjoining darkroom, toilet, and office. Hospitals of 150 beds and over should have at least 1 additional radiographic room. The radiology department shall have ray protection as required.

Physical therapy: <sup>1</sup> In hospitals of 100 beds and over: Space should be provided for electrotherapy, hydrotherapy, massage, and exercise. Equipment to be furnished when competent technician is acquired.

Pharmacy:

Up to and including 100 beds: Drug room with minimum facilities for compounding.

Over 100 beds: Complete pharmacy and may include space for manufacturing and solution preparation depending on policy of hospital.

(c) *Nursing department.*

General:

No room should have more than 4 beds. Each room shall have a lavatory. Nursing units composed of multi-bed rooms shall have a quiet room. No patients' bed rooms shall be located on any floor which is below grade.

Size of nursing unit: Not more than 35 beds.<sup>1</sup>

Larger units permissible, if additional facilities are provided.

Minimum room areas: 80 sq. ft. per bed in two- and four-bed rooms. 100 minimum sq. ft. in one-bed rooms.

Service rooms in each nursing unit:

Nurses' station.  
Utility room.  
Floor pantry (one per floor).<sup>2</sup>  
Toilet facilities.  
Bedpan facilities.  
One bathroom.  
Stretcher alcove.  
Linen and supply storage.  
Janitors' closet.

Treatment room: One for each two nursing units per floor.<sup>1</sup>

Solarium: One for each nursing floor.<sup>1</sup>

Nurses' toilet room: One for each nursing floor. In hospitals of 100 beds and over the maternity department shall be housed in a separate wing or floor.

(d) *Nursery department.*

Full term nursery:

Area required: Not less than 24 square feet per bassinet, 30 square feet recommended. Number of bassinets: No more than 12 bassinets in each full term nursery, 8 recommended.

Examination and work room: One examination and work room between each two full term nurseries.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> As required by program.

Premature nursery: Recommended in hospitals of 16 or more maternity beds and required in hospitals of 25 or more maternity beds. Area required: 30 square feet per bassinet. Number of bassinets: Not more than six in each premature nursery.

Workroom: Work area may be within premature nursery but the area so provided shall be in addition to the required bassinet area.

Observation nursery:

Area required: 40 square feet per bassinet. Number of bassinets: Approximately 10% of full term bassinets. Not more than 6 bassinets in each observation nursery.

Workroom: One workroom for each two observation nurseries.

Formula room: Location in obstetrical nursery area or near kitchen optional.

(e) *Surgical department.* (Shall be located to prevent traffic through it to any other part of the hospital.)

Operating rooms:

Major: One operating room for each 50 beds or major fraction thereof up to and including 200 beds. Above 200 beds the number of operating rooms will be based on the expected average of daily operations.

Cystoscopy: One in each hospital over 100 beds highly desirable. Should have an adjoining toilet room. Location in hospital optional.

Fracture room:<sup>1</sup> One in each hospital over 100 beds. Shall have an adjoining splint room. Location in hospital optional.

Auxiliary rooms:

Sub-sterilizing facilities.

Scrub-up facilities.

Nurses' locker room with toilet.

Janitors' closet.

Instrument storage.

Clean-up room.

Anesthesia equipment storage.

Surgical Supervisor station.

Doctor's locker room with toilet.

Storage closet.

Stretcher alcove.

Storage room for sterile supplies beginning at 100 beds.

Dark room beginning at 100 beds.<sup>1</sup>

Central sterilizing and supply room:

Divided into work space, sterilizing space and sterile storage space.

Adjacent room for storage of unsterile supplies.

Location in hospital optional.

(f) *Obstetrics department.* (Shall be located to prevent traffic through it to any other part of the hospital. Shall be completely separated from surgical department.)

Delivery rooms: One for each 20 maternity beds.

Labor beds: One for each 10 maternity beds.

Auxiliary rooms:

Sub-sterilizing facilities.

Scrub-up facilities.

Clean-up room or utility room.

Supervisors' station.

Nurses' locker room with toilet starting at 50 beds.<sup>1</sup>

Sterile storage closet.

Stretcher alcove.

Janitors' closet.

Doctors' locker room with toilet starting at 50 beds.

(g) *Emergency department.*

Accident room:

With separate ambulance entrance.<sup>1</sup>

Shall be separated from operating suite and obstetrical suite.

Additional facilities will depend on amount of accident work expected.

(h) *Service department.*

Dietary facilities:

Main kitchen and bakery.

Dietitian's office.

Dishwashing room.

Adequate refrigeration.

Garbage refrigerator.<sup>1</sup>

Can washing facilities.

Day storage room.

Personnel dining space.

Provide 12 square feet per person; may be designed for multiple seatings.

Cafeteria or table service optional.

Housekeeping facilities:

Laundry; unless commercial or other laundry

<sup>1</sup> Desirable but not mandatory.

facilities are available, each hospital shall have a laundry of sufficient capacity to process full 7 days' laundry in work week and contain the following areas:

- Sorting area—completely enclosed.
- Processing area.
- Clean linen and sewing room separate from laundry.
- Sewing room may be included in clean linen room in hospitals up to and including 100 beds.
- Where no laundry is provided in the hospital, a soiled linen room and a clean linen and sewing room shall be provided.
- Housekeeper's office: May be combined with clean linen room in hospitals up to 100 beds.

**Mechanical facilities:**

- Boiler and pump room.
- Shower and locker facilities.<sup>1</sup>
- Engineers' space.
- Maintenance shops: In hospitals up to and including 100 beds at least one room shall be provided.<sup>1</sup> In larger hospitals separation of carpentry, painting and plumbing should be provided.

For minimum requirements for mechanical and electrical work see the respective sections.

**Employees' facilities:**

- Nurses' locker room:
- Lockers as required.
- Rest room.
- Toilet room.

**Female help lockers:**

- Locker room.
- Rest room.
- Toilet and shower room.<sup>1</sup>

**Male help lockers:**

- Locker room.
- Toilet and shower room.<sup>1</sup>

Ratio of male and female help will vary and size of locker rooms must be adjusted accordingly.

**Storage:**

- Inactive record storage.
- General storage: 20 square feet per bed and to be concentrated in one area insofar as possible. Mechanical maintenance storage may be in a separate area.

(i) *Out-patient department.* (If survey indicated that the out-patient department is unnecessary it may be omitted.)

**General:**

- Out-patient department should be located on the most easily accessible floor. It should have convenient access to radiology, pharmacy, laboratory, and physical therapy.
- The size will vary in different locations and is not necessarily proportional to the size of the hospital. The patient load must be estimated to determine the number of rooms required.
- An out-patient department may be combined with the public health center clinics if the health center is a part of the hospital.

**Administrative:**

- Waiting space with public toilets.
- Appointment and cashiers' office.
- Social service office.

**Clinical:**

- History or screening room.
- Examination and treatment rooms:
- Eye, ear, nose, and throat room.<sup>1</sup>
- Dental facilities (2 chairs desirable).<sup>1</sup>
- Utility room.

(j) *Contagious disease nursing unit.*<sup>1</sup> Where 10 or more beds are contemplated for nursing contagious diseases, they should be housed in a separate contagious disease nursing unit.

**Patient rooms:**

- A maximum of 2 beds in each room.
- Glazed partition between beds.<sup>1</sup>
- Patient rooms shall have a view window from corridor.
- Each patient room shall have a separate toilet and a lavatory in the room.

**Each nursing unit shall contain:**

- Nurses' station.
- Utility room.
- Nurses' work room.
- Treatment room.
- Scrub sinks strategically located in the corridor.
- Serving pantry with separated dishwashing room adjacent.
- Doctors' locker space and gown room.
- Nurses' locker space and gown room.
- Janitors' closet.

<sup>1</sup> Desirable but not mandatory.

Storage closet.  
Stretcher alcove.

(k) *Pediatric nursing service.*<sup>1</sup>

Where 16 or more pediatric beds are contemplated, a separate pediatric nursing unit shall be provided and contain the following items:

General:

Each bed in a multi-bedroom shall be in a clear glazed cubicle.<sup>1</sup>

Each room shall have a lavatory.

Patients' rooms wherever possible should have clear glazing between them and in the corridor partitions.

Minimum area:

80 square feet per bed in two-bed rooms and over.

100 square feet in single rooms.

40 square feet per bassinet in nurseries.

Each nursing unit shall contain:

Nursery with bassinets in cubicles.

Observation suite.

Treatment room.

Nurses' station.

Nurses' toilet room.

Utility room.

Floor pantry.<sup>3</sup>

Play room or solarium.

Bath room.

Toilet room for each sex.

Bed pan facilities.

Wheelchair and stretcher alcove.

Janitors' closet.

Storage closet.

(1) *Psychiatric nursing unit in the general hospital.*<sup>1</sup>

General: Layout and design of details to be such that the patient will be under close observation and will not be afforded opportunity for escape, suicide, hiding, etc. Care must be taken to avoid sharp projections of corners of structure, exposed pipes, heating elements, fixtures, etc., to prevent injury by accident.

Minimum room areas:

80 square feet per bed in 4-bed rooms.

100 square feet in single rooms.

40 to 50 square feet per patient in day rooms.

Each nursing unit shall contain:

Doctors' office.

Examination room.

Nurses' station.

Day room.

Utility room.

Bedpan facilities.

Pantry.

Dining room.

Toilet room.

Shower and bathroom.

Continuous tub room (for disturbed patients)<sup>2</sup>

Patients' laundry (personal) for women's wards only.

Patients' locker room.

Storage closet (for recreational and occupational therapy).

Stretcher closet.

Linen closet.

Supply closet.

Janitors' closet.

§ 53.135 **Tuberculosis hospital.**

(a) *Administration department.*

From 50 up to and including 200 beds:

Business office with information counter.<sup>5</sup>

Medical social service office.<sup>5</sup>

Medical director's office.

Secretary's office.<sup>5</sup>

Supervisor's office.

Medical record and film filing room.<sup>5</sup>

Viewing room, library<sup>5</sup> and conference room.

Singly or in combination.

Lobby and waiting room.

Retiring room.<sup>1</sup>

Toilets.

Over 200 and up to 500 beds:

Business office and information counter.<sup>5</sup>

Business manager's office.<sup>5</sup>

Secretary.<sup>5</sup>

Admitting office.<sup>5</sup>

Two medical social service offices.<sup>5</sup>

Medical director's office.

Secretary.

Assistant medical director's office.

Supervisor's office.

Secretary.

Assistant director of nurses' office.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

<sup>3</sup> As required by program.

<sup>5</sup> These facilities need not be provided if the Tuberculosis Hospital is in connection with a general hospital in which such facilities exist.

Medical record room.<sup>5</sup>  
Library<sup>5</sup> and conference room.  
Staff lounge and locker room.  
Lobby and waiting room.  
Retiring room.<sup>1</sup>  
Toilets.

(b) *Adjunct diagnostic and treatment facilities.*

Except for the morgue and autopsy this department should be preferably located convenient to both in- and out-patients.

Laboratory:

Adequate facilities for chemical, bacteriological, serological, pathological and hematological services.

Basal metabolism and electrocardiography:

One room near the laboratory.

Morgue and autopsy:

From 50 up to and including 200 beds: combination morgue and autopsy room with mortuary refrigerator.<sup>5</sup>

Over 200 and up to 500 beds:

Morgue with mortuary refrigerator.  
Autopsy room.  
Shower and toilet room.  
Separate exit.

Radiology:

From 50 up to and including 200 beds:

Radiographic room.<sup>5</sup>  
Dark room.<sup>5</sup>  
Dressing booths.<sup>1</sup>

Must be convenient to out-patient department as well as in-patients.

Over 200 and up to 500 beds:

Radiographic room.  
Dark room.  
Dressing booths.  
Viewing room.  
Roentgenologist's office.  
Film file room.

Must be convenient to out-patient department as well as in-patients.

Pharmacy:

From 50 up to and including 200 beds:

Drug room with minimum facilities for mixing.<sup>5</sup>

Over 200 and up to 500 beds: Complete pharmacy and may include space for manufacturing and solution preparation depending on policy of hospital.

Dental and eye, ear, nose, and throat:

From 50 up to and including 200 beds:

Dental facilities (2 chairs desirable).<sup>5</sup>  
One eye, ear, nose, and throat room.<sup>5</sup>

Over 200 and up to 500 beds:

Dental facilities (2 chairs desirable).  
Eye, ear, nose, and throat room.  
Waiting room.

Occupational therapy:

Library.  
Barber shop.  
Canteen.  
Assembly room.  
Flexible space for learning and working in crafts and classroom for patient instruction shall be provided.

(c) *Nursing department.*

General: At least 30 percent of the hospital beds should be in single rooms.<sup>1</sup> No room should have more than four beds.<sup>1</sup> Each room shall have a lavatory. No patients' bedrooms shall be located on any floor which is below grade.

Size of nursing unit: No nursing unit shall be larger than 50 beds.

Minimum room areas:

80 square feet per bed in two- and four-bed rooms.  
100 square feet in one-bed rooms.

Service rooms in each nursing unit:

Nurses' station.  
Utility room.  
Floor pantry (one per floor).<sup>3</sup>  
Toilet and washroom:  
Water closets—1 to each 8 patients.  
Lavatories.  
Dental basins.<sup>1</sup>  
Storage closet for supplies.  
Bath and shower room:  
Bath tubs and/or showers—1 to 14 patients.  
Gowning space.  
Bed pan facilities.  
Linen closet.  
Janitors' closet.  
Space for wheel chairs and stretchers.  
Storage closet for equipment.

<sup>1</sup> Desirable but not mandatory.

<sup>3</sup> As required by program.

<sup>5</sup> These facilities need not be provided if the Tuberculosis Hospital is in connection with a general hospital in which such facilities exist.



Doctors' office and treatment room—one for each nursing unit.

Solarium: One for each nursing unit.

Sputum technique facilities.

Nurses' toilet room: One for each nursing floor.

Nurses' cloak closet—one for each nursing floor.

(d) *Surgical department.* (Shall be located to prevent traffic through it to any other part of the hospital.)

From 50 up to and including 200 beds:

Major operating room.<sup>5</sup>

Sterilizing room.<sup>5</sup>

Central supply and work room.<sup>5</sup>

Scrub-up facilities.<sup>5</sup>

Clean-up room.<sup>5</sup>

Storage closet.<sup>5</sup>

Janitors' closet.<sup>5</sup>

Doctors' locker room with toilet and showers.<sup>5</sup>

Nurses' locker room with toilet and showers.<sup>5</sup>

Over 200 and up to 500 beds:

Major operating room: One for each 200 beds or major fraction thereof.

Minor operating and fracture room.

Sub-sterilizing facilities.

Clean-up room.

Scrub-up facilities.

Janitors' closet.

Storage room for sterile supplies.

Anesthesia storage.

Surgical supervisor office.

Doctors' locker room with toilet and shower.

Nurses' locker room with toilet and shower.

Storage closet.

Stretcher alcove.

Central sterilizing and supply room divided into work space, sterilizing space, and sterile storage space.

Adjacent room for storage of unsterile supplies.

Pneumothorax suite:

Pneumothorax room with dressing booths.

Fluoroscopy room.

Waiting space.

From 50 up to and including 200 beds:

One pneumothorax suite for 100 beds or major fraction thereof.

Over 200 and up to 500 beds: One pneumothorax suite for 100 beds or major fraction thereof.

(e) *Service department.*

Dietary facilities:

Main kitchen and bakery.<sup>5</sup>

Dietitian's office.<sup>5</sup>

Patients' dishwashing room.

Staff and help dishwashing room.<sup>5</sup>

Adequate refrigeration.<sup>5</sup>

Garbage refrigerator.<sup>1</sup>

Can washing room.

Day storage room.<sup>5</sup>

Help dining room.<sup>5</sup>

Staff dining room.<sup>5</sup>

Patients' dining space—to serve 40 percent of the patients.<sup>1</sup>

Provide 12 square feet per person in dining rooms. May be designed for two seatings. Cafeteria or table service optional.

Housekeeping facilities:

Laundry: <sup>5</sup>

Sorting area.

Processing area.

Clean linen room.

Sewing room.

Laundry capacity shall be adequate to process full 7 days' laundry in workweek.

Housekeeper's office.

Incinerator.

Mechanical facilities: <sup>5</sup>

Boiler and pump room.

Engineers' office.

Shower and locker facilities.

Maintenance shops:

Carpentry.

Painting.

Plumbing.

For minimum requirements for mechanical and electrical work, see the respective sections.

Employees' facilities: <sup>5</sup>

Nurses' locker room without nurses' residence:

Locker room with lockers as required.

Rest room.

Toilet and shower room.

Where nurses' residence is adjacent provide only rest room and toilet.

<sup>1</sup> Desirable but not mandatory.

<sup>5</sup> These facilities need not be provided if the Tuberculosis Hospital is in connection with a general hospital in which such facilities exist.

Female help locker room :

- Locker room.
- Rest room.
- Toilet and shower room.

Male help locker room :

- Locker room.
- Rest room.
- Toilet and shower room.

Storage: <sup>5</sup>

- General storage. Provide 20 square feet per bed, preferably concentrated in one area.
- Record storage.

Out-patient department: <sup>5</sup>

- Out-patient department should be located on most easily accessible floor. Must be convenient to radiology, pharmacy, and laboratory departments.

Size will vary in different locations and with the availability of other examination and diagnostic facilities, and is not necessarily proportionate to the size of the hospital. The estimated patient load will determine the number, size, and scope of individual facilities in out-patient department.

Facilities required :

Administrative:

- Waiting room with public toilets.
- Information, appointment and records office.
- Medical social service office.
- Janitors' closet.

Clinical:

- History or screening room.
- Examination rooms.
- Dressing booths.
- Pneumothorax room.
- Fluoroscopy room.
- Utility room.
- Storage room.

§ 53.136 Mental hospital.

(a) *General.* (1) A mental hospital should be on a large acreage with ample space around all buildings for recreation, attractive landscaping and the proper segregation of the various patient classification groups and building functions; and should be readily accessible to the community which it is to serve. It is strongly urged that mental hospitals be not greater than 1,500 beds.

(2) The mental hospital presents a special problem of patient classification, treatment

and supervisory function. In the following minimum requirements an over-all organization is designated with certain supervisory or organizational functions mentioned in their most desirable, but not mandatory, locations and these may, therefore, be changed to other locations.

(3) Patients have been classified and grouped according to behavior, and requirements vary somewhat for each classification. Minimum room area requirements are grouped into the following main categories, as follows:

(i) Medical and surgical and chronic disease classification: 70 square feet per bed in alcoves and four-bed rooms; 100 square feet in single rooms.

(ii) Tuberculosis classification: 70 square feet per bed in alcoves and four-bed rooms; 100 square feet in single rooms.

(iii) Reception, convalescent, chronic disturbed, industrial classifications: 70 square feet per bed in alcoves and four- (or more) bed rooms; 80 square feet in single rooms.

(iv) Infirm and inactive: 60 square feet per bed in four- (or more) bed rooms; 80 square feet in single rooms.

(4) No patient bedrooms shall be located on any floor which is below grade.

(b) *Administration.* This area includes the administrative, business and public contact functions of the institution.

Location: Near main entrance to institution and close to reception area.

General:

- Entrance lobby.
- Public toilets (male and female).
- Information and telephones (main switchboard).
- Post office.
- Personnel toilets (male and female).
- Mechanical room.

Offices:

- Director.
- Assistant director.
- Conference room.
- Business administrator.
- Business.
- Public relations and services.

<sup>5</sup> These facilities need not be provided if the Tuberculosis Hospital is in connection with a general hospital in which such facilities exist.

Secretaries.  
Janitors' closet.

Medical:

Central records office.  
Central records room.  
Inactive records storage.

(c) *Reception.* (1) This area includes the reception and treatment of new patients, most of whom will be entering a mental hospital for the first time. Since they are new patients, and in need of very careful treatment, it is necessary to separate and prohibit contact between patients in the following classifications of behavior:

Quiet.  
Depressed.  
Disturbed.

(2) In addition, each of the above classifications should be separated by sexes, and each classification should have its own complete nursing units with all nursing facilities available, and each should be readily accessible to an outdoor area. All safety and security measures should be observed in this group. Intensive care and treatment will be given these new patients in an effort to cure them in the first few weeks of treatment. Should the patient fail to recover in this comparatively short period of time he will be sent to other nursing areas for continued treatment. Three other nursing areas will be classified according to the behavior of the patients which they are to house.

(3) The reception area should be set well apart from the other areas of the hospital, and should contain sufficient diagnostic, treatment, recreational and occupational facilities, to furnish complete treatment in order that these new patients may recover without having been transferred to the other areas of the mental hospital.

(4) The number of beds required in this reception area must be determined by study of the total receiving and intensive treatment facilities in the community which is served. The total number of beds in this and the convalescent area should be in accord with the admissions within a three- to six-month period.

Location: Near administration area.

General:

Lobby.

Visitors' toilets (male and female).  
Main visitors room with alcoves.  
Janitors' closets.  
Mechanical room.

Administration:

Medical records office.  
Information.  
Chief psychiatrist's office and conference room.  
Secretaries' offices.  
Clinical psychologist's office.  
Chief of nursing service and staff.  
Chief of social service and offices.  
Personnel toilets (male and female).

Staff facilities:

Doctors' toilet room.  
Nurses' lounge and toilet room.

Admission:

Ambulance entrance.  
Patients' bath and toilet.<sup>1</sup>  
Utility room.<sup>1</sup>  
Examination and consultation rooms.

Adjunct diagnostic and treatment facilities:

Minor surgery and treatment room.  
Portable X-ray storage room.<sup>1</sup>  
Dark room.<sup>1</sup>  
Small laboratory.<sup>1</sup>  
Patients' toilet and shower.  
Small treatment room (for shock therapy, etc.).  
Patients' exercise room (directly accessible to outdoor exercise yard).

Occupational therapy:

Occupational therapy room (to be located near quiet patient units).  
Storage closets.  
Occupational therapists' office.<sup>1</sup>  
Barber and beauty shop.

Nursing units: The following classifications of nursing units of not more than 25 beds will be required:

Quiet nursing units (male and female).  
Depressed nursing units (male and female).  
Disturbed nursing units (male and female).  
For small reception facilities a combination of patient classifications may be provided in one nursing unit of not more than 25 beds provided that contact between the patients

<sup>1</sup> Desirable but not mandatory.

of each classification may be prohibited or limited.

#### Suggested bed distribution of nursing units:

Each disturbed nursing unit:	Patients
Two 4-bed wards.....	8
Three 2-bed or 3-bed wards.....	6 or 9
Four or six 1-bed rooms.....	4 or 6
Two 1-bed rooms (isolation unit) <sup>1</sup> .....	2
Total .....	20 to 25

Each depressed nursing unit:	Patients
Two 4-bed wards.....	8
Two 3-bed alcoves.....	6
Four 1-bed rooms.....	4
(Isolation unit) <sup>1</sup> .....	2
Total .....	20

Quiet unit: Same bed distribution as disturbed nursing units.

#### Facilities in each nursing unit:

Doctor's consultation room (for each two units).

Examination room.

Nurses' station.

Utility room.

Bed pan facilities.

Small dining room and pantry:

Essential for disturbed.

Convenient for depressed.

Unnecessary for quiet.

Patients' locker room.

Linen closet.

Patients' shower and bath room.

Patients' dressing room.

Patients' toilets.

Patients' wash room.

Continuous tub room (for disturbed units) <sup>2</sup>

Day room (40 to 50 square feet per patient and preferably divided into one small and one large room).

Occupational therapy storage closet.

Janitors' closet.

#### Dietary:

Patients' dining room cafeteria service: this dining room will be used by patients from convalescent houses as well as from reception area (two seatings may be used).

Janitors' closet.

Coat room and toilets (male and female)<sup>1</sup>

Kitchen (serving).

Dishwashing room (enclosed).

Employees' toilet.

Patients' toilet (male and female).

Refrigerated garbage storage.

Can washing room.

(d) *Convalescent*. (1) This area is considered a part of the reception area and will house new patients who have been sent from the reception building, and who are expected to recover within six months to a year. Most of these patients will have the same classification as those in the reception area. Small complete nursing units, separate for each sex, should be provided. Special treatment, such as mechanical fever, electric shock, special electro and hydro therapy, and insulin, etc., can be given in the reception building.

(2) These patients will also use the dining room facilities of the reception area.

(3) In general, while most of these patients are continuing to receive intensive treatment, they are well enough and manageable enough to go freely or be escorted to their activities.

(4) The same security and safety measures are required as those for the reception area.

(5) Location: Grouped by sexes near reception area.

#### General:

Entrance lobby.

Visitors' room with alcoves.

Visitors' toilets (male and female).

Attendants' locker and toilet room.

Mechanical room.

Nursing units (to contain not more than 50 beds).

Suggested bed distribution of each nursing unit:

	Patients
One 8-bed ward.....	8
Four 4-bed wards.....	16
Eleven 1-bed wards.....	11
Total.....	35

#### Facilities in each nursing unit:

Doctors' consultation room (for each two units).

Examination room.

Nurses' station.

Utility room.

Bed pan facilities.

Pantry (one for each two nursing units).

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

Patients' locker.  
 Patients' toilet room.  
 Patients' shower or bath room.  
 Day room (40 to 50 square feet per patient—preferably divided into one large and one small room).  
 Storage closet (occupational and recreational therapy equipment).  
 Linen closet.  
 Janitors' closet.  
 Patients' wash room.  
 One-third of the nursing units, for both men and women should have one continuous tub room.<sup>2</sup>

(e) *Chronic disturbed.* This area should be separate from the main group of mental hospital facilities and set apart from the nursing areas of other patient classifications because of possible noise or other disturbance. It will be used to treat restless, noisy, assaultive or suicidal patients and must be designed to provide the greatest security and observation. Since these patients are very active it is necessary to have an outdoor area or exercise yard, and due to the amount of equipment and care these patients require, and the resulting necessary space for treatment, not less than two nursing units to a building are recommended.

**Location:** These buildings to be located away from the other nursing buildings.

**General:**

Entrance lobby.  
 Visitors' room.  
 Visitors' toilets (male and female).  
 Beauty shop (female buildings).  
 Barber shop (male buildings).  
 Attendants' locker and toilet room.  
 Pantry (for two nursing units).  
 Mechanical room.  
 Enclosed exercise yard (100 square feet per patient).

**Treatment facilities:**

Hydrotherapist's office and toilet.<sup>2</sup>  
 Continuous tub room.<sup>2</sup>  
 Linen storage facilities.<sup>2</sup>  
 Patients' dressing room.  
 Janitors' closet.  
 Exercise room (near outdoor exercise yard).  
 Storage closet (for small gymnasium equipment).

Nursing units (to contain not more than 30 beds):

Suggested bed distribution of each unit:

	<i>Patients</i>
One 8-bed ward.....	8
Two 4-bed wards.....	8
Ten 1-bed rooms.....	10
Total.....	26

**Facilities in each nursing unit:**

Doctors' office with toilet (for each two units).  
 Examination room.  
 Nurses' station.  
 Utility room.  
 Patients' locker room.  
 Patients' toilet room.  
 Patients' wash room,  
 Patients' shower and dressing room.  
 Day room (40 to 50 square feet per patient).  
 Preferably divided into (1) small room and (1) large room.  
 Storage closet (recreational equipment).  
 Occupational therapy room (one for each two units).  
 Linen closet.  
 Janitors' closet.

**Dietary:**

Dining room—cafeteria service.  
 Serving kitchen.  
 Dishwashing room.  
 Employees' toilet.  
 Janitors' closet.

(f) *Infirm.* This area will house patients who are in need of considerable medical care and who may be infirm. The very sick will be transferred to the medical and surgical or chronic disease building, but these infirm patients will need constant and careful nursing. Minimum security and all safety measures will be required, and the nursing units should be complete with all facilities available and readily accessible to an out-door yard or area.

**Location:** Close to medical and surgical building.

**General:**

Entrance lobby.  
 Visitors' room.

<sup>2</sup> If required by program.

Visitors' toilets (male and female).  
 Barber shop (male buildings).<sup>1</sup>  
 Beauty shop (female buildings).<sup>1</sup>  
 Attendants' locker and toilet room (male and female).  
 Mechanical room.  
 Enclosed yard (40 square feet per patient).<sup>1</sup>  
 Nursing units (to contain not more than 60 beds). Suggested bed distribution for each unit:

	<i>Patients</i>
Two 10-bed wards-----	20
Four 4-bed wards-----	16
Four 1-bed rooms-----	4
Total -----	40

Facilities in each nursing unit:  
 Doctors' office (for each 3 units).  
 Examination room.  
 Nurses' station.  
 Utility room.  
 Bed pan facilities.  
 Pantry and dining room (one for each two units).  
 Patients' locker room.  
 Patients' wash room.  
 Patients' toilet room.  
 Patients' dressing room.  
 Patients' shower or bath room.  
 Day room (30 square feet per patient).  
 Storage closet (for recreational and occupational therapy equipment).  
 Linen closet.  
 Wheel chair and stretcher closet.  
 Janitors' closet.

Dietary:  
 Serving kitchen.  
 Dishwashing room.  
 Employees' toilet.  
 Janitors' closet.

(g) *Inactive*. This area will house patients who are lethargic. They need a considerable amount of attention, most of which will be furnished by the physical therapist and occupational therapist. They will be urged into activities furnished in the occupational and recreational therapy buildings, but some of the lighter occupational and physical therapy should be provided in this area. All security and safety measures will be required.

Location: In main group of nursing buildings and near gymnasium and recreation buildings.

General:  
 Entrance lobby.  
 Visitors' room.  
 Visitors' toilets (male and female).  
 Occupational therapy room.  
 Attendants' locker and toilet room.  
 Mechanical room.  
 Enclosed yard (100 square feet per patient).<sup>1</sup>

Nursing units (to contain not more than 50 beds) suggested bed distribution (of each unit):

	<i>Patients</i>
Three 10-bed wards-----	30
Two 4-bed wards-----	8
Four 1-bed rooms-----	4
Total -----	42

Facilities in each nursing unit:  
 Doctors' office (for each 3 units).  
 Examination room.  
 Nurses' station.  
 Utility room.  
 Bedpan facilities.  
 Pantry (for each 2 units).  
 Patients' locker room.  
 Patients' wash room.  
 Patients' toilet room.  
 Patients' shower or bath room.  
 Patients' dressing room.  
 Day room (40 to 50 square feet per patient and preferably divided into one small and one large room).  
 Storage closet (for recreational and occupational therapy equipment).  
 Linen closet.  
 Janitors' closet.

Dietary:  
 Dining room.  
 Serving kitchen.  
 Dishwashing room.  
 Employees' toilet.  
 Janitors' closet.

(h) *Industrial*. This area will house patients who are well enough to be occupied on the grounds, farm, industrial buildings, shops, kit-

<sup>1</sup> Desirable but not mandatory.

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chens, laundry, etc. Less supervision and care is necessary than in the other groups, and these patients can go to the out-patient department of the medical and surgical building for examination and treatment.

Location: In main group of nursing buildings near service buildings.

General:

- Entrance lobby.
- Visitors' room.
- Visitors' toilets (male and female).
- Attendants' locker and toilet room.
- Mechanical room.

Nursing units (to contain not more than 60 beds) suggested bed distribution:

	<i>Patients</i>
Two 16-bed wards.....	32
Two 8-bed wards.....	16
Four 1-bed rooms.....	4
Total .....	52

Facilities in each nursing unit:

- Doctors' office and examination room—one for each 3 units.
- Nurses' station.
- Patients' toilet.
- Patients' dressing room.
- Patients' shower room.
- Patients' locker room.
- Patients' wash room.
- Day room (40 to 50 square feet per patient) preferably divided into one small and one large room.
- Storage closet (for recreation equipment).
- Linen closet.
- Janitors' closet.

(i) *Medical and surgical.* This area will house patients who have been hospitalized from nursing units of other classifications for short periods of illnesses, and should be housed in a modern general hospital complete with all facilities to serve the entire mental hospital community. Nursing units should be arranged for easy segregation of patients and the adjunct diagnostic and treatment facilities are recommended to be on the first or ground floor for easy access to the out-patient department. All security and safety measures should be incorporated in this building. The number of beds shall be approximately 4 percent of the total patients which this building serves.

Location: Between main group of nursing area and reception area.

General:

- Entrance lobby.
- Information counter.
- Visitors' toilets (male and female).
- Mechanical room.

Administration:

- Chief physician's office.
- Medical record room.
- Head nurse's office.
- Secretaries' offices.
- Personnel toilets (male and female).

Staff facilities:

- Doctors' locker and shower room.
- Nurses' locker and shower room.

Adjunct diagnostic and treatment facilities:

Laboratory: Separate spaces for office, clinical pathology, bacteriology and serology, washing and sterilizing.

Basal metabolism and electrocardiography: Near laboratory and convenient to out-patient department.

Morgue and autopsy room:<sup>1</sup> Combination morgue and autopsy with mortuary refrigerator.

Radiology:

Radiographic room with an adjoining dark room and office.

X-ray therapy suit.<sup>1</sup>

Physical therapy: Suite for electro-therapy, hydro-therapy, and exercise room with adjoining office.

Pharmacy: Drug room with minimum facilities for mixing. (May be in service area).

Nursing units (to contain not more than 30 beds) suggested bed distributions:

Medical wards (25 beds each):

	<i>Patients</i>
Two 4-bed wards.....	8
Three 2-bed rooms.....	6
Nine 1-bed rooms.....	9
Isolation suite <sup>1</sup> .....	2
Total .....	25

Surgical wards (25 beds each) same as medical wards.

Employees' wards:<sup>1</sup> Maximum size, 25 to 30 beds.

<sup>1</sup> Desirable but not mandatory.

NOTE: Where isolation suite or contagious disease nursing unit is available the small units in each nursing unit are not required.

Facilities in each nursing unit:

- Doctors' examination room (one for each two nursing units).
- Nurses' station.
- Utility room.
- Bed pan facilities.
- Pantry (one for each two nursing units).
- Patients' bath and shower room.
- Supply closet.
- Patients' toilet room (male and female).
- Day room (approximately 25 square feet per patient). Omit for employees' wards.
- Storage closet (recreational and occupational therapy equipment).
- Stretcher and wheel chair closet.
- Linen closet.
- Janitors' closet.

Surgical department: Should be located to prevent traffic through it to any other part of hospital.

Operating rooms:

- Major: One for each 50 beds up to and including 200 beds. Above 200 beds the number of operating rooms will be based on the expected average of daily operations.
- Minor: One in each hospital over 50 beds.
- Cystoscopy:<sup>1</sup> One in each hospital over 100 beds. Shall have an adjoining toilet room.
- Fracture room: One in each hospital over 100 beds. Shall have an adjoining splint room.

Auxiliary rooms:

- Substerilizing facilities.
- Scrub-up facilities.
- Nurses' locker room with toilet and shower.
- Instrument room beginning at 100 beds.
- Clean-up room.
- Anesthesia equipment storage.
- Surgical supervisor's station.
- Doctors' locker room with toilet and shower.
- Storage closet.
- Stretcher closet.
- Storage room for sterile supplies beginning at 100 beds.
- Janitors' closet.
- Dark room beginning at 100 beds.

Central sterilizing and supply room:

- Divided into work space, sterilizing space, and sterile storage space.

Adjacent room for storage of unsterile supplies.

Emergency department:

- Ambulance entrance.
- Receiving bath and toilet.
- Utility room.
- Supply and stretcher storage.
- Emergency operating room, near out-patient department.

Service department:

- Kitchen (serving).
- Dishwashing room.
- Refrigerated garbage room.
- Can washing room.
- Dining rooms (for  $\frac{1}{3}$  of patients).
- Storage.
- General storage (20 square feet per bed).
- Housekeepers' office.
- Linen storage room.
- Sewing room.
- Linen sorting room.

Personnel facilities:

- Locker and toilet rooms (male and female).
- Attendants' locker and toilet rooms (male and female).

Out-patient department:

- Waiting room.
- Examination and treatment rooms (including eye, ear, nose and throat rooms and gynecology room<sup>1</sup>).
- Record room.
- Dental facilities (2 chairs desirable).
- Electroencephalographic unit.

NOTE: Out-patient department should be convenient to radiology, laboratory, therapy, emergency, etc.

(j) *Chronio disease.* (1) This area will house patients who have chronic illness, or who are in need of intensive treatment and nursing care or those who, because of infectious diseases, need to be isolated.

(2) Nursing units of this classification should be attached to the medical and surgical building for easy access to the diagnostic and treatment facilities.

(3) Not all of these nursing units need have maximum safety and security measures.

<sup>1</sup> Desirable but not mandatory.



(4) The number of beds shall be approximately 7.5 percent of the total number of patients which these buildings serve.

Location: Attached to medical and surgical building.

General: Corridors to service department and adjunct facilities.

Nursing units (to contain not more than 30 beds) suggested bed distribution (of each nursing unit):

	<i>Patients</i>
Two 4-bed wards-----	8
Three 2-bed wards-----	6
Eight 1-bed rooms-----	8
Total-----	22

Facilities in each nursing unit:

Doctors' office (for each 2 units).

Examination room.

Nurses' station.

Utility room.

Bed pan facilities.

Pantry (for each 2 nursing units).

Dining room (for 1/2 of patients in nursing unit).

Patients' locker room.

Patients' wash room.

Patients' toilet.

Patients' dressing room.

Patients' shower or bath room.

Day room (30 square feet per patient).

Closet (recreational and occupational therapy equipment).

Stretcher and wheel chair closet.

Linen closet.

Janitors' closet.

(k) *Tuberculosis.* (1) For patients of this classification, it is recommended to use the requirements of the tuberculosis hospital. In addition, patients will be grouped according to behavior as Quiet or Disturbed. Security and safety measures comparable to those of the reception area are required.

(2) The number of beds shall be determined as approximately 5 percent of the total patients which this building serves.

(1) *Gymnasium, theater, recreation, library and chapel.* (Combination or separate buildings acceptable.)

Location: Adjacent to main group of nursing and reception areas.

General:

Entrance lobby.

Coat rooms and toilets (male and female).

Personnel toilets (male and female).

Mechanical room.

Theater facilities:

Office.

Hall (seating capacity based on 7 square feet per person with 40 percent attendance of patients and personnel).

Projection booth.

Stage.

Dressing rooms with toilets (two for each sex).

Workshop.

Chapel facilities:

Three offices for ecclesiastics.

Toilets.

Three small prayer rooms.

Portable altars (where chapel is not separate).

Storage rooms.

Gymnasium facilities:

Recreational therapists' office.

Personnel locker and toilet rooms (male and female).

Patients' locker and toilet rooms (male and female).

Basketball court (standard college size plus space for collapsible seating).

Small gymnasium (for exercise equipment).

Storage rooms.

Recreation facilities:

Chief recreational therapist's office.

Bowling alleys (with space for spectators).

Billiard room.

Ping pong room.

Patients' barber shop.

Patients' beauty shop.

Canteen (for light lunch, drinks, etc.):

Office and table areas.

Cooking and fountain areas.

Dishwashing and sterilizing.

Storage.

Garbage refrigeration.<sup>1</sup>

Can washing facilities.

<sup>1</sup> Desirable but not mandatory.

Sales rooms.  
Storage room.

Library:  
Librarians' office.  
Reading room (current and request matter).  
Stock room.  
Work room and storage space.

Music rooms:  
Music therapists' office.  
Music room (approximately 500 square feet with portable stage).  
Store rooms.  
Music rooms (approximately 250 square feet).

(m) *Occupational therapy.*  
Location: Adjacent to main group of nursing areas and reception area.  
General:  
Entrance lobby.  
Patient coat room and toilets (male and female).  
Personnel coat room and toilets (male and female).  
Mechanical room.  
Administration: Office for occupational therapist.  
Facilities:  
Open floor space (for occupational equipment).  
One or more special purpose rooms.  
Storage rooms (for materials and equipment).  
Industrial therapy occupations should be located near the service group of buildings.

(n) *Central kitchen and dining rooms.*  
Location: In main group of nursing buildings.  
General: Load on dining rooms, kitchens and preparation will vary; see requirements of each.  
Men patients' coat room and toilet.<sup>1</sup>  
Women patients' coat room and toilet.<sup>1</sup>  
Men attendants' coat room and toilet.  
Women's attendants' coat room and toilet.  
Dining rooms: Patients' and personnel (capacity 15 square feet per person).

Kitchen:  
Dietitians' office and toilet.  
Complete cooking and baking facilities.  
Dishwashing room.  
Preparation (meat and vegetables).  
Adequate refrigeration.  
Day storage.  
Garbage refrigeration.<sup>1</sup>  
Can washing facilities.  
Janitors' closet.  
Personnel lockers and toilets.

(o) *Storage buildings.*

Location: In service groups of buildings.  
General: Area (20 square feet per patient).

(p) *Laundry.* Adequate to process seven full days of laundry per work week.

Location: In service group of buildings.

Facilities:  
Manager's office and toilet.  
Receiving room.  
Sorting area.  
Contaminated receiving room.  
Sterilizing room.  
Processing room.  
Clean linen storage.  
Sewing room.  
Personnel locker and toilet room.

(q) *Heating plant.*

Location: In service group of buildings.

General:  
Heating plant (to be determined by engineering studies).  
Emergency generating facility.  
Office.  
Personnel toilets.  
General repair shop.  
Carpenter shop.  
Electrical shop.  
Plumbing shop.  
Paint shop.

(r) *Incinerator.* As required. See § 53.153 (a) (13).

<sup>1</sup> Desirable but not mandatory.

**§ 53.137 Psychiatric hospital.**

(a) *General.* (1) The principles of psychiatric safety shall be followed throughout. Materials and details of construction shall be such that patients will not be afforded opportunity for escape, suicide, etc. Care must be taken to avoid sharp projections of corners of structure, exposed piping, heating elements, fixtures, hardware, etc.

(2) For requirements of sizes of doors, widths of corridors, sizes of elevators, provisions for ventilation, fire protection, etc., see sections on Details, Finishes, etc.

(b) *Administration department.*

Up to and including 100 beds:

Business office with information counter.

Chief psychiatrist's office.

Chief psychologist's office (if there is no out-patient department).

Record office.

Director of nurses' office.<sup>1</sup>

Social service offices (if there is no out-patient department to be near receiving).

Staff lounge.

Lobby.

Public toilets.

From 100 to 500 beds:

Business office.

Chief psychiatrist's office.

Chief psychologist's office (if there is no out-patient department).

Social service offices (if there is no out-patient department).

Director of nursing.

Record room.

Staff lounge.

Library and conference room.

Lobby.

Public toilets.

Toilets for administrative personnel.

(c) *Receiving department.*

Facilities for male and female receiving:

Entrance hall.

Dressing room.

Bath and toilet room.

Medical examination room.

Waiting room.

Stretcher closet.

Clerks' offices.

Doctors' office.

(d) *Adjunct diagnostic and treatment facilities.*

Laboratory:

Up to and including 100 beds:

Office.

Laboratory.

Over 100 beds: Separate spaces for office, clinical pathology, bacteriology, washing and sterilizing.

Basal metabolism and electrocardiography:

Up to and including 100 beds: No special provision necessary.

Over 100 beds: Room near laboratory and convenient to out-patient department.

Morgue and autopsy: Combination morgue and autopsy with mortuary refrigerator. (Is not required in hospital of less than 100 beds if similar facilities are available nearby.)

Dental facilities (2 chairs desirable).

Eye, ear, nose and throat suite.

Electro-encephalographic suite.

Radiology:

Up to and including 100 beds: One radiographic room and dark room and convenient to out-patient department.

Over 100 beds: At least one additional radiographic room.

Physical therapy:

Electro-therapy.

Hydro-therapy with exercise space.

Continuous tub and pack room.<sup>2</sup>

Small gymnasium, convenient to outdoor area, and to disturbed patients.

Pharmacy: One room with minimum facilities for compounding.

Occupational therapy:

Space for small woodworking tools and benches for carpentry, metal work, leatherwork, printing, weaving, rug making, etc.

Office.

Storage room.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

(e) *Surgical department.*

Operating rooms:

Major: One.

Minor: One, with adjoining splint room.

Auxiliary rooms:

Sub-sterilizing facilities.

Scrub-up facilities.

Clean-up room.

Anesthesia room.<sup>1</sup>

Anesthesia storage.

Doctors' locker room with toilet.

Nurses' locker room with toilet.

Storage closet.

Stretcher closet.

Janitors' closet.

Storage room for sterile supplies and instruments.

Surgical department to be located to prevent traffic through it from other parts of the hospital.

Central sterilizing and supply room—divided into work space, sterilizing space, and sterile storage—adjacent room for storage of unsterile supplies.

(f) *Nursing department.*

General: The layout and the design of details to be such that the patient will be under close observation and will not be afforded opportunity for escape, suicide, hiding, etc. No patients' bedrooms shall be located on any floor which is below grade. Provision shall be made for the following classifications:

New admissions (male).

New admissions (female).

Quiet ambulant (male).

Quiet ambulant (female).

Medical and surgical.

Disturbed (male).

Disturbed (female).

Alcoholic (male).

Alcoholic (female).

Criminalistic (male).

Criminalistic (female).

Children.

Minimum room areas:

80 square feet per bed in alcoves and four-bed rooms.

100 square feet in single rooms.

40 to 50 square feet per patient in day rooms and preferably divided into one large and one small room.

Facilities for each nursing unit:

Doctors' office and examination room.

Nurses' station and toilet.

Day room.

Utility room.

Pantry.

Dining room.

Wash room and toilets.

Patients' locker.

Shower and bath room.

Storage closet (for recreational and occupational therapy).

Supply closet.

Linen closet.

Janitors' closet.

Stretcher closet (medical and surgical unit).

Bedpan facilities (medical and surgical unit).

Isolation suite: In medical and surgical unit.

(g) *Service department.*

Dietary facilities:

Main kitchen and bakery.

Dietitians' office.

Dishwashing room.

Adequate refrigerators.

Garbage refrigerator.<sup>1</sup>

Can washing room.

Day storage room

Storage room

Fire

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Employees' facilities:

Nurses' locker rooms. If no nurses' residence:

Locker room.

Rest room.

Toilet and shower room.

Attendants' locker rooms. If no attendants' residence (male and female):

Locker room.

Toilet and shower rooms.

Other female help lockers:

Locker room.

Rest room.

Toilet and shower room.

Other male help lockers:

Locker room.

Toilet and shower room.

Storage:

Record space.

General storage: 20 square feet per bed and to be concentrated in one area.

(h) *Out-patient department.* (If provided.)

General:

Located on the ground floor. Entrance separate from main entrance of hospital.<sup>1</sup>

It must be convenient to radiology, laboratory and physical therapy.

The patient load must be estimated in order to determine the number of consultation and examining rooms.

Facilities required:

Administrative:

Waiting room with public toilets.

Cashiers' and appointment office.  
service offices.

Logical examination rooms.  
examination rooms.

rooms.

rooms.

Director of nurses' office.

Medical Director's office.

Medical record room.

Medical social service office.

Combination conference room, doctors' lounge, and staff library.

Lobby and waiting room.

Public telephone.

Public toilets.

Personnel toilets.<sup>1</sup>

(b) *Adjunct diagnostic and treatment facilities.*

Except for the morgue and autopsy room, these facilities should be located convenient to both inpatients and outpatients.

Laboratory:

Adequate facilities for chemical, bacteriological, pathological and hematological services.

Basal metabolism and electrocardiography facilities.

Morgue and autopsy room: In Chronic Disease Hospitals of 100 beds or more. Desirable but not mandatory in Chronic Disease Hospitals of under 100 beds if such services are available locally.

Radiology:

Each Chronic Disease Hospital to have at least one radiographic room with toilet, adjoining dark room, film filing space and dressing facilities.

Pharmacy:

Drug room with minimum facilities for compounding and dispensing. Complete pharmacy may include facilities for bulk compounding and solution preparation depending on policy of hospital.

Physical therapy:

Examination room.

Office and work space for physical therapy staff.

Rehabilitation gymnasium for adults.<sup>2</sup>

Rehabilitation gymnasium for children if children are included in program.<sup>2</sup>

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ow.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

Hydrotherapy area.<sup>2</sup>  
 Thermotherapy and massage area.<sup>2</sup>  
 Storage for supplies and equipment.  
 Outdoor exercise area.<sup>2</sup>

Occupational therapy:

Office and work space for occupational therapy staff.

Therapy area:

In large units space should be divided for diversified work. (Separate room for children is desirable.)

Storage for supplies and equipment.

Toilet facilities for physical therapy and occupational therapy departments.

Facilities for teaching activities of daily living.

Speech and hearing facilities:<sup>1</sup>

Offices for therapists and space for examination and treatment.

Artificial appliance facilities:<sup>2</sup>

Space for fitting and adjustment service.

(c) *Out-patient department.*

Should be provided only if survey indicates that an out-patient department is needed.

Should be located on the most easily accessible floor and have convenient access to radiology, pharmacy, laboratory and rehabilitation facilities.

The size will vary in different locations and is not necessarily proportional to the size of the hospital. The patient load must be estimated to determine the number and type of rooms required.

Administration:

Waiting space with public toilets.

Appointment and cashier's desk.

Medical social service office.

Clinical:

Examination and treatment rooms: Number and specialties to be determined by the character of the patient load.

Utility room.

(d) *Nursing department.*

General: No patients' room shall have more than 4 beds. Six beds, not more than 3 beds deep from outside wall, will be permitted in chronic disease hospitals of 100 beds or more.

Not more than 2 beds per patients' room is desirable. Each patients' room shall have a lavatory. A toilet room with lavatory accessible from adjoining patients' room is recommended. Each nursing unit shall have a separation room. No patients' room shall be located on any floor which is below grade.

Size of nursing unit:

Should not be more than 40 beds. Larger units will be permitted if additional service facilities are provided as required.

Minimum patients' room areas:

80 square feet per bed (100 square feet desirable) in multi-bed patients' rooms; 100 square feet per bed (125 square feet desirable) in one-bed patients' rooms.

Service facilities in each nursing unit:

Nurses' station.

Nurses' toilet.

Utility room.

Treatment room.

Floor pantry.

Solarium:

Provide 25 square feet per bed for 75 percent of beds on nursing unit.

Dining room:

Provide 25 square feet per bed for 75 percent of beds on nursing unit.

The percentage of the beds for which solarium and dining area must be provided may be reduced depending on the type of patient to be cared for.

It is recommended that the dining and solarium areas be adjacent so that they can be combined into one room for recreational and other group activity purposes.

Toilet facilities:

If centralized toilets are provided, a toilet room for each sex at a ratio of 1 water closet to each 8 beds will be required. One of the water closet enclosures in each toilet room should be at least 5 feet by 6 feet to permit toilet training.

If toilets provided adjacent to patients' rooms are not large enough, a separate training toilet, at least 5 feet by 6 feet, should be provided.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

Bedpan facilities.

Bathing facilities:

1 bathtub.

1 shower. (A separate bath room for each sex, containing at least one bathtub and one shower, is recommended. A ratio of one bathtub or one shower for each 10 beds is desirable.)

Stretcher and wheelchair parking space.

Clean linen storage.

Equipment and supply storage.

Janitor's closet.

Patient's laundry.<sup>1</sup>

NOTE: It is recommended that a specially designed nursing unit, similar to that required in the section on rehabilitation facilities in a hospital, be provided for rehabilitation patients in the chronic disease hospital.

(e) *Surgical department.*<sup>2</sup>

Shall be located to prevent traffic through it to any other part of the hospital.

Major operating room.

Scrub-up facilities.

Anesthesia equipment storage.

Clean-up room.

Storage closet.

Janitor's closet.

Central sterilizing and supply room.

If a surgical department is not included the central sterilizing and supply room must be provided elsewhere in the hospital.

Doctors' locker room with toilet. (Shower desirable but not mandatory.)

Nurses' locker room with toilet. (Shower desirable but not mandatory.)

Adequate refrigeration.

Garbage disposal facilities.

Day storage room.

Personnel dining room: Provide 12 square feet per person. May be designed for multiple seating.

Janitor's closet.

Housekeeping facilities:

Laundry; unless commercial or other laundry facilities are available, each chronic disease hospital shall have a laundry of sufficient capacity to process full 7 days' laundry in work week and contain the following areas:

Sorting area.

Processing area.

Clean linen and sewing room separate from laundry.

Where no laundry is provided in the hospital, a soiled linen room and a clean linen and sewing room shall be provided.

Housekeeper's office.

Mechanical facilities:

Boiler and pump room.

Desk space for engineer.

Shower and locker facilities.<sup>3</sup>

Maintenance shops: In hospitals up to and including 100 beds at least one room shall be provided. In larger hospitals separation of carpentry, painting, and plumbing should be provided.

Employees' facilities:

Nurses' lockers:<sup>4</sup>

Locker room: one locker for each 2 hospital beds.

Rest room.

Toilet room. (Shower desirable but not mandatory.)

Female help lockers:<sup>4</sup>

Locker room.

Rest room.

Toilet room. (Shower desirable but not mandatory.)

Male help lockers:

Locker room.

Toilet room. (Shower desirable but not mandatory.)

Ratio of male and female help will vary and size of locker rooms must be adjusted accordingly.

**Storage:**

Inactive record storage.

Patients' clothes storage room.

General storage: 20 square feet per bed and to be concentrated in one area.

Storage of outdoor equipment.<sup>1</sup>

**§ 53.139 Nurses' residence.**

**Rooms:**

One nurse per room: <sup>1</sup>

100 square feet in single rooms.

150 square feet in double rooms.

Lavatory in each room.<sup>1</sup>

Closet or wardrobe for each nurse.

No nurses' rooms shall be located on any floor which is below grade.

**Common floor facilities:**

Lounge with kitchenette to serve 30 to 60 nurses.

Laundry room with 2 trays and 2 ironing boards to serve each 60 nurses.<sup>1</sup> If not provided on each floor, a centrally located laundry room containing the same proportion of trays and ironing boards shall be provided.

Bath room: One shower or tub for each 6 beds.

Toilet room: With lavatories in bedrooms—1 water closet for each 6 beds and 1 lavatory for each 3 water closets. Without lavatories in bedrooms—1 water closet for each 6 beds and 1 lavatory for each 5 beds.

Linen closet.

Janitors' closet.

Telephone facilities.<sup>1</sup>

**General facilities:**

Lobby.

Office.

Main lounge (with alcoves <sup>1</sup>).

Men's toilet (off lobby).

Storage room for trunks.

Laundry distribution room.<sup>1</sup>

Employees' toilet room.<sup>1</sup>

Boiler room (if facilities not available elsewhere).

**§ 53.140 School of nursing.**

**(a) Teaching facilities.**

One science laboratory room.

One dietetics laboratory room.

One nursing arts laboratory with adequate facilities.

One classroom to accommodate approximately twice the number of students as the nursing arts laboratory.

One lecture room to accommodate total student body.

One library.

(b) *Offices.* Offices for instructors.

(c) *General.*

Storage room convenient to class rooms.

Toilet room.

Janitors' closet.

**§ 53.141 Public health centers**

**(a) Administration.**

Where health department administration personnel has no offices in health center:

Waiting room.

Public toilets.

Office for public health nurses.

Staff toilets.

Assembly space: Waiting room may be used for this purpose where health centers serve under 30,000 population.

Where health department administration offices are provided in health centers add:

Health officer's office.

Office for sanitary engineers.

Health education office.

Staff room and library: In health center for over 30,000 population.

(b) *Clinical.* The clinical services, and extent of such services, provided in the health center will depend on the program contemplated by the health department to take care adequately of the particular needs of the population served by the health center.

For populations up to 30,000:

Two examination rooms for maternal and child health, V.D. and TB clinics.

Consultation room.

Utility room.

Dental room.<sup>1</sup>

<sup>1</sup> Desirable but not mandatory.



For population over 30,000, if the following services are provided, they shall include areas noted as follows:

Maternal and child health:

Demonstration room.

Examining room.

Toilet.

Tuberculosis and X-ray:

X-ray room with dressing booths.

Dark room.

Consultation and viewing room.

Venereal disease:

Examination room.

Treatment room.

Consultation room.

Toilet.

Dental:

Dental facilities (2 chairs desirable).

Small dental laboratory.

Pharmacy: Dispensing room.

(c) *Laboratory.* The volume and type of laboratory tests in the health center will vary with local conditions and will determine the size of the laboratory. Such factors as density of population, area to be served, type of center (municipal, county, or rural), its use as a branch of the State laboratory and availability of other laboratory facilities must be considered.

One room is required for urinalysis, hematology, and dark field examinations for syphilis and storage of biologicals furnished by the State Health Department.

Where food control, sanitation and communicable disease work is contemplated an-  
room shall be furnished for this  
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*vice.*

storage areas:

office and janitors' supplies.

clinical supplies.

tional material.

closets:

supplies.

al supplies.

tional material.

closet: Centrally located.

plant.

## § 53.142 State public health laboratory.

(a) *Administration department.*

Director's office.

Secretary's office.

Assistant Director's office

Information desk and switchboard.

Clerical office.

Office supply room.

Library.

Staff meeting room.

Records and filing room.

Mailing and receiving room for incoming specimens, distribution of containers and of biologicals.

Specimen and emergency treatment room.

(b) *Bacteriology department.*

Office.

Water, food and milk laboratory.

Enteric disease and agglutination laboratory.

Tuberculosis laboratory.

Diagnostic laboratory.

Incubator room.

Sterile room.

Rabies room.

Adequate refrigeration.

(c) *Syphilis serology department.*

Office.

Laboratory: Section of room separated by partitions for centrifuges and preparation of specimens.

(d) *Chemistry department.*

Office.

Laboratory: Facilities for water, food, drug, toxicology, and/or industrial hygiene analyses.

Instrument room: Facilities for darkening.

(e) *Research and investigation.*

Laboratory: Complete laboratory facilities within unit.

(f) *Biologicals department.*

Adequate refrigeration.

Deep freeze unit.

Room temperature storage.

(g) *Central services.*

Culture media and reagent preparation room.

Glassware cleaning room.  
 Acid cleaning unit.  
 Sterilizing room for culture media and clean glassware only.  
 Supply room for storage and issue of sterile supplies, general supplies, chemicals, and glassware. Adjacent to sterilizing and glassware cleaning room.  
 Bulk storage room.  
 Janitor service room.  
 Maintenance and utilities unit: Provisions for metal and woodwork, and glassblowing.  
 Incinerator (animal).  
 Animal quarters:  
   Animal rooms.  
   Room for cleaning and sterilizing cages.  
   Preparation room for food and bedding.  
   Operating and animal inoculation room.

(h) *Facilities for personnel.*

Men's locker room with washroom and shower.  
 Women's locker room with washroom and shower.  
 Rest room.  
 Lunch room.  
 Staff toilets.

(i) *Additional facilities.* If the following activities are included, minimum requirements will be as follows:

Consultation and evaluation service to local laboratories:  
   Office.  
   Laboratory.

Manufacture of biologicals: This department, including Blood and Blood Products, shall be adequately isolated from the other laboratories. In the case of smallpox and tetanus vaccine preparation separation may be satisfactory in the same building if a separate entrance is provided and no interior connection exists to this department. A separate mechanical ventilating system must be provided.

Office.  
 Laboratory: Cubicles for isolation work.  
 Culture media room.  
 Sterile room.  
 Sterilizing room.  
 Glasswashing room.

Adequate refrigeration.  
 Deep freeze unit.  
 Storage room, controlled temperature.  
 Packaging room.

Blood and blood products:  
   Laboratory: Space and equipment for processing.  
   Sterile room.  
   Office (may be shared with biologicals department).  
   Adequate refrigeration (may be shared with biologicals department).  
   Storage room (may be shared with biologicals department).

Pathology department: Laboratory.

Clinical laboratory department: Laboratory.

Virology department: This department shall be efficiently isolated from other laboratories including a separate mechanical ventilating system:

Office.  
 Laboratory: Cubicles for isolation work.  
 Sterile room.  
 Sterilizing room.  
 Inoculation and operating room.

Animal quarters:  
   Facilities for storage of food and bedding.  
   Cleaning and sterilizing of cages.  
   Locker room with washroom and shower.

§ 53.143 Diagnostic or treatment centers.

(a) *General.* (1) The extent of the diagnostic, treatment, and ancillary facilities will be determined by the services contemplated and the estimated patient load.

(2) Where the facility is to be an integral part of a hospital, the requirements of adjunct diagnostic and treatment facilities and outpatient department of general hospital, § 53.134 (b) shall apply.

(3) Where a diagnostic or treatment center is not to be an integral part of a hospital, then the facilities listed below must be provided unless available for convenient use in an associated health facility.

(4) The planning of diagnostic or treatment centers should provide for the privacy of the patient during interview, examination, and treatment.

(b) *Administration facilities.*

Administrative, business, and receptionist space.  
Medical records space.  
Waiting space.  
Public telephone.

(c) *Diagnostic facilities.* (In certain types of specialized projects, such as mental health clinics, the need for radiological and laboratory facilities will be determined by the services contemplated.)

Radiographic room with adjoining dark room.  
Utility and sterilizing facilities.  
Laboratory.

(d) *Diagnostic and treatment facilities.* If medical examination and/or treatment are to be included the following shall be added:

Consultation, examination and treatment space is required by the services contemplated.

(e) *Service facilities.*

Storage.  
Janitor's closet.  
Employees' locker facilities.  
Toilet facilities.  
Boiler room.  
Incinerator.  
Accessible parking space.<sup>1</sup>

**§ 53.144 Rehabilitation facilities (general).**

(a) Wherever possible rehabilitation facilities should be located on the ground floor. The evaluation and treatment facilities should be grouped to facilitate integration of the program and located for convenient access by inpatients and outpatients.

(b) In determining the size of facilities for inpatient and outpatient services, it should be considered that the outpatient load is usually much larger than the inpatient load.

**§ 53.145 Rehabilitation facilities (multiple disability) in a hospital.**

The facilities listed in this section which are in an existing hospital and which are conveniently located and available for use need not be provided.

(a) *Administration.*

Appointment and cashier's space.  
Office for volunteer services coordinator.<sup>1</sup>  
Lobby and waiting room.  
Public telephone booth.  
Public toilets.  
Personnel toilets.<sup>1</sup>

(b) *Evaluation and treatment facilities.* Evaluation and treatment facilities shall include medical facilities and, depending upon the program, one or more of the following: psychological, social or vocational, as listed below.

Conference and library room.

Medical facilities:

Offices, examination rooms and work space for medical personnel such as physicians and nurses.

Dental facilities:<sup>2</sup>

Office and work space for provision of appropriate dental treatment.

Physical therapy:

Office and work space for physical therapy staff.

Rehabilitation gymnasium for adults.

Rehabilitation gymnasium for children if children are included in program.<sup>1</sup>

Hydrotherapy area.

Thermotherapy and massage area.

Storage for supplies and equipment.

Outdoor exercise area.<sup>1</sup>

Occupational therapy:

Office and work space for occupational therapy staff.

Therapy area:

In large units space should be divided for diversified work (separate room for children is desirable).

Storage space for supplies and equipment.

Facilities for teaching activities of daily living.

Speech and hearing facilities:<sup>2</sup>

Offices for therapists and space for examination and treatment.

Artificial appliance facilities:

Space for fitting and adjustment service.

Psychological facilities:

Office and work space for psychological testing evaluation and counseling.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

Social service facilities:

Office space for private interview and counselling.

Vocational facilities:

Office and work space for counseling, evaluation, prevocational programs and placement. A prevocational area is not required for facilities exclusively serving children under the age of 12.

Special education:

Schoolroom for children if children are included in program.

General facilities:

Locker, toilet and shower facilities for patients.

Clean and soiled linen facilities.

Locker and toilet facilities for female volunteers.<sup>1</sup>

Locker and toilet facilities for male volunteers.<sup>1</sup>

(c) *Nursing unit for adults.*<sup>1</sup>

General: It is recommended that this unit be located on the ground floor near the treatment area. Approximately one-fifth of the beds should be in two-bed rooms, the remainder in four-bed rooms. Each patients' room shall have a lavatory. Generous wardrobe space for each patient should be provided in the patients' rooms. A toilet room, with lavatory, accessible from adjoining patients' rooms, is recommended. No patients' room shall be located on any floor which is below grade.

Size of nursing unit:

Not more than 50 beds, 35 to 40 beds recommended.

Minimum patients' room areas:

100 square feet per bed in multi-bed patients' rooms.

Service facilities in each nursing unit for adults:

Nurses' station.

Nurses' toilet.

Utility room.

Examination and treatment room.

Floor pantry.

Solarium: Provides 25 square feet per bed for 75 percent of beds on nursing unit.

Dining room: Provide 25 square feet per bed for 75 percent of beds on nursing unit.

It is recommended that the dining and solarium area be adjacent so that they can be combined into one room for recreational and other group activity purposes.

Toilet facilities.

If centralized toilets are provided, a toilet room for each sex at a ratio of 1 water closet to each 5 beds will be required. One of the water closet enclosures in each toilet room should be at least 5 feet by 6 feet to permit toilet training.

If toilets provided adjacent to patients' rooms are not large enough, a separate training toilet, at least 5 feet by 6 feet, should be provided.

Bedpan facilities.

Bathing facilities.

1 bathroom for each sex.

1 shower to each 8 beds.

1 bathtub.

Stretcher and wheelchair parking space.

Clean linen storage.

Equipment and supply storage.

Janitor's closet.

Telephone alcove (one per floor).

Patients' laundry.<sup>1</sup>

(d) *Nursing unit for children.*<sup>1</sup>

General: It is recommended that this unit be located on the ground floor near the treatment area. No patients room should have more than 4 beds. Provide 2 two-bed rooms in each nursing unit. Each patients' room shall have a lavatory. Generous wardrobe space for each patient should be provided in the patients' room. A toilet room, with lavatory, accessible from adjoining patient's room is recommended. No patients' room shall be located on any floor which is below grade.

Size of nursing unit:

Not more than 30 beds.

Minimum room areas:

100 square feet per bed in two-bed and four-bed rooms. 80 square feet per bed recommended for crib room if provided.

Service facilities in each nursing unit for children:

Nurses' station.

<sup>1</sup>Desirable but not mandatory.

Nurses' toilet.  
Utility room.  
Examination and treatment room.  
Floor pantry.  
Solarium: Provide 25 square feet per bed for 75 percent of beds on nursing unit.  
Dining room: Provide 25 square feet per bed for 75 percent of beds on nursing unit.

It is recommended that the dining and solarium area be adjacent so that they can be combined into one room for recreational and other group activity purposes.

**Toilet facilities.**

If centralized toilets are provided, a toilet room for each sex at a ratio of 1 water closet to each 5 beds will be required. One of the water closet enclosures in each toilet room should be at least 5 feet by 6 feet to permit toilet training.

If toilets provided adjacent to patients' rooms are not large enough a separate training toilet, at least 5 feet by 6 feet, should be provided.

**Bedpan facilities.**

**Bathing facilities:**

- 1 bathroom for each sex.
- 1 shower to each 8 beds.
- 1 bathtub.

Stretcher and wheelchair parking space.

Clean linen storage.

Equipment and supply storage.

Janitor's closet.

Telephone alcove (one per floor).

(a) *Service department.* In general the facilities will be required as those separate rehabilitation facility (ability) for inpatients and outpatients, except that those service facilities available in the adjoining hospital be duplicated.

separate rehabilitation facility (disability) for inpatients and outpatients.

*Information.*

Information counter, telephone booth and cashier's window.  
Director's office.

Director of nurses' office.  
Office for volunteer services coordinator.<sup>1</sup>  
Case records room.  
Library for staff and patients.  
Lobby and waiting room.  
Public telephone booth.  
Public toilets.  
Personnel toilets.

(b) *Evaluation and treatment facilities.*

Evaluation and treatment facilities shall include medical facilities and, depending upon the program, one or more of the following: psychological, social, or vocational, as listed below.

**Clinical laboratory.<sup>2</sup>**

Radiology: Radiographic room with adjoining dark room, toilet and office.<sup>2</sup>

Pharmacy: Drug room with minimum facilities for compounding.<sup>2</sup>

Conference and library room.

**Medical facilities:**

Offices, examination rooms and work space for medical personnel such as physicians and nurses.

Dental facilities: <sup>2</sup> Office and work space for provision of appropriate dental treatment.

**Physical therapy:**

Office and work space for physical therapy staff.

Rehabilitation gymnasium for adults.

Rehabilitation gymnasium for children if children are included in program.<sup>1</sup>

Hydrotherapy area.

Thermotherapy and massage area.

Storage for supplies and equipment.

Outdoor exercise area.<sup>1</sup>

**Occupational therapy:**

Office and work space for occupational therapy staff.

Therapy area.

In large units space should be divided for diversified work (separate room for children is desirable).

Storage space for supplies and equipment.

Facilities for teaching activities of daily living.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

Speech and hearing facilities: Offices for therapists and space for examination and treatment.<sup>2</sup>

Artificial appliance facilities: Space for fitting and adjustment service.

Psychological facilities: Office and work space for psychological testing evaluation and counseling.

Social service facilities: Office space for private interview and counseling.

Vocational facilities:

Office and work space for counseling, evaluation, prevocational programs and placement. A prevocational area is not required for facilities serving children under the age of 12.

Special education: Schoolroom for children if children are included in program.

General facilities:

Locker, toilet, and shower facilities for patients.

Clean and soiled linen facilities.

(c) *Nursing unit for adults.*

General: It is recommended that this unit be located on the ground floor near the treatment area. Approximately one-fifth of the beds should be in two-bed rooms, the remainder in four-bed rooms. Each patients' room shall have a lavatory. Generous wardrobe space for each patient should be provided in the patients' rooms. A toilet room, with lavatory, accessible from adjoining patients' rooms, is recommended. No patients' rooms shall be located on any floor which is below grade.

Size of nursing unit: Not more than 50 beds, 35 to 40 beds recommended.

Minimum patients' room areas: 100 square feet per bed in multi-bed patients' rooms.

Service facilities in each nursing unit for adults:

Nurses' station.

Nurses' toilet.

Utility room.

Examination and treatment room.

Floor pantry.

Solarium: Provide 25 square feet per bed for 75 percent of beds on nursing unit.

Dining room: Provide 25 square feet per

bed for 75 percent of beds on nursing unit.

It is recommended that the dining and solarium area be adjacent so that they can be combined into one room for recreational and other group activity purposes.

Toilet facilities.

If centralized toilets are provided, a toilet room for each sex at a ratio of 1 water closet to each 5 beds will be required. One of the water closet enclosures in each toilet room should be at least 5 feet by 6 feet to permit toilet training.

If toilets provided adjacent to patients' rooms are not large enough, a separate training toilet, at least 5 feet by 6 feet, should be provided.

Bedpan facilities.

Bathing facilities:

1 bathroom for each sex.

1 shower to each 8 beds.

1 bathtub.

Stretcher and wheelchair parking space.

Clean linen storage.

Equipment and supply storage.

Janitor's closet.

Telephone alcove (one per floor).

Patients' laundry.<sup>1</sup>

(d) *Nursing unit for children.<sup>2</sup>*

General: It is recommended that this unit be located on the ground floor near the treatment area. No patients' room should have more than 4 beds. Provide 2 two-bed rooms in each nursing unit. Each patients' room shall have a lavatory. Generous wardrobe space for each patient should be provided in the patients' rooms. A toilet room, with lavatory, accessible from adjoining patients' room is recommended. No patients' room shall be located on any floor which is below grade.

Size of nursing unit: Not more than 30 beds.

Minimum patients' room areas: 100 square feet per bed in 2-bed and 4-bed room. 80 square feet per bed recommended for crib room if provided.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

Service facilities in each nursing unit for children:

Nurses' station.

Nurses' toilet.

Utility room.

Examination and treatment room.

Floor pantry.

Solarium: Provide 25 square feet per bed for 75 percent of beds on nursing unit.

Dining room: Provide 25 square feet per bed for 75 percent of beds on nursing unit.

It is recommended that the dining and solarium area be adjacent so that they can be combined into one room for recreational and other group activity purposes.

Toilet facilities.

If centralized toilets are provided, a toilet room for each sex at a ratio of 1 water closet to each 5 beds will be required. One of the water closet enclosures in each toilet room should be at least 5 feet by 6 feet to permit toilet training.

If toilets provided adjacent to patients' rooms are not large enough, a separate training toilet, at least 5 feet by 6 feet, should be provided.

Bedpan facilities.

Bathing facilities:

1 bathroom for each sex.

1 shower to each 8 beds.

1 bathtub.

Stretcher and wheelchair parking space.

Clean linen storage.

Equipment and supply storage.

Janitor's closet.

Telephone alcove (one per floor).

*(e) Service department.*

Central sterilizing and supply room.

Dietary facilities:

Main kitchen.

Dietitians' space.

Dishwashing room.

Adequate refrigeration.

Garbage disposal facilities.

Day storage room.

Personnel dining space. Provide 12 square feet per person; may be designed for multiple seatings.

Outpatients' dining facilities as required.

Janitor's closet.

Housekeeping facilities:

Laundry; unless commercial or other laundry facilities are available, each rehabilitation facility shall have a laundry of sufficient capacity to process full 7 days' laundry in work week and contain the following areas:

Sorting area.

Processing area.

Clean linen and sewing room separate from laundry.

Where no laundry is provided in the hospital, a soiled linen room and a clean linen and sewing room shall be provided.

Housekeeper's office.

Mechanical facilities:

Boiler and pump room.

Shower and locker facilities.<sup>2</sup>

Engineers' space.

Maintenance shops: At least one room shall be provided. In large rehabilitation facilities, separation of carpentry, painting and plumbing is recommended.

Employees' facilities:

Female staff and volunteers lockers:

Locker room.

Rest room.

Toilet and shower room.

Female help lockers:

Locker room.

Rest room.

Toilet and shower room.

Male staff and volunteers lockers:

Locker room.

Toilet and shower room.

Male help lockers:

Locker room.

Toilet and shower room.

Storage:

General storage. 20 square feet per bed and to be concentrated in one area.

Storage of out-door equipment.<sup>1</sup>

**§ 53.147 Separate rehabilitation facility (multiple disability) for outpatients only.**

*(a) Administration.*

Business office with information counter, telephone switchboard and cashier's window.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

Administrator's office.  
 Director of nurses' office.  
 Office for volunteer services coordinator.<sup>1</sup>  
 Case records room.  
 Library for staff and patients.  
 Lobby and waiting room.  
 Public telephone booth.  
 Public toilets.  
 Personnel toilets.<sup>1</sup>

(b) *Evaluation and treatment facilities.*

Evaluation and treatment facilities shall include medical facilities and, depending upon the program, one or more of the following: psychological, social or vocational, as listed below.

Conference and library room.

Medical facilities:

Offices, examination rooms and work space for medical personnel such as physicians and nurses.

Dental facilities:<sup>2</sup> Office and work space for provision of appropriate dental treatment.

Physical therapy:

Office and work space for physical therapy staff.

Rehabilitation gymnasium for adults.

Rehabilitation gymnasium for children if children are included in program.<sup>1</sup>

Hydrotherapy area.

Thermotherapy and massage area.

Storage for supplies and equipment.

Outdoor exercise area.<sup>1</sup>

Occupational therapy:

Office and work space for occupational therapy staff.

Therapy area: In large units space should be divided for diversified work (separate room for children is desirable).

Storage space for supplies and equipment.

Facilities for teaching activities of daily living.

Speech and hearing facilities:<sup>2</sup> Offices for therapists and space for examination and treatment.

Artificial appliance facilities: Space for fitting and adjustment service.

Psychological facilities: Office and work space for psychological testing evaluation and counseling.

Social service facilities: Office space for private interview and counseling.

Vocational facilities:

Office and work space for counseling, evaluation, prevocational programs and placement. A prevocational area is not required for facilities exclusively serving children under the age of 12.

Special Education:

Schoolroom for children if children are included in program.

General facilities:

Locker, toilet and shower facilities for patients.

Clean and soiled linen facilities.

(c) *Service facilities.*

Dietary facilities.<sup>2</sup>

Housekeeping facilities: Clean and soiled linen storage.

Janitors' closet(s).

Mechanical facilities:

Boiler room.

Maintenance shop.

Employees' facilities:

Female staff and volunteers lockers:

Locker room.

Rest room.

Toilet and shower room.

Female help lockers:

Locker room.

Rest room

Toilet and shower room.

Male staff and volunteers lockers:

Locker room.

Toilet and shower room.

Male help lockers:

Locker room.

Toilet and shower room.

Storage:

General storage.

**§ 53.148 Single disability rehabilitation facility.**

The requirements for a single disability rehabilitation facility will be dependent upon the specific project program, which shall include, however, services in the four basic areas—medical, psychological, social and vocational. In

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.



general the single disability rehabilitation facility will follow the pattern established for the multiple disability rehabilitation facility. In other respects the general standards set forth herein shall apply.

§ 53.149 Nursing homes.

(a) *General.* (1) The facilities listed in this section need not be provided if functionally available in an adjoining hospital.

(2) Nursing homes should be planned to approximate the home atmosphere as closely as possible. It is desirable that larger bedrooms be provided than are generally provided in general hospitals, that each bed be equitably placed in relation to the windows, that wardrobe and closet space in patients' rooms be more generous. The use of more open, informal planning, the provision of inviting recreational spaces both indoors and out, the use of decoration, color, furnishings, etc., to minimize institutional effect is recommended.

(b) *Administration department.*

Business office.<sup>4</sup>  
Administrator's office.<sup>4</sup>  
Consultation room.<sup>1</sup>  
Lobby and waiting room.  
Public toilet facilities.  
Public telephone.

(c) *Ancillary facilities.*

Recreation room.  
Occupational activities room.  
Patients' dining room.  
Provide at least 50 square feet per bed for 75 percent of the total beds in the nursing home for recreation, occupational activities and patients' dining.  
It is recommended that the recreation, occupational activities and patients' dining areas be adjacent so that they can be combined into one room for recreational and other group activity purposes.  
Physical therapy services as required.  
Patients' laundry.<sup>4</sup>  
Storage for occupational and recreational equipment.  
Outdoor recreation area.<sup>2</sup>

(d) *Nursing department.*

General: No patients' room shall have more than 4 beds. Six beds, not more than three beds deep from outside wall, will be permitted in nursing homes of over 100 beds. Not more than 2 beds per patients' room is desirable. Each patients' room shall have a lavatory. A toilet room, with lavatory, accessible from adjoining patients' room is recommended. At least one single room with private toilet shall be provided in each nursing unit for each sex for purposes of medical isolation, incompatibility, personality conflict, etc. No patients' room shall be located on any floor which is below grade.

Size of nursing unit: Should not have more than 40 beds. Larger units will be permitted if additional service facilities are provided as required.

Minimum patients' room areas: 80 square feet per bed (100 square feet desirable) in multiple bed patients' rooms; 100 square feet per bed (125 square feet desirable) in one-bed patients' rooms.

Service facilities for each nursing unit:

Nurses' station.  
Nurses' toilet.  
Utility room.  
Treatment room.

Floor pantry: one for each nursing floor in multi-story buildings.<sup>2</sup>

Toilet facilities:

If centralized toilets are provided, a toilet room for each sex at a ratio of 1 water closet to each 8 beds will be required. One of the water closet enclosures in each toilet room should be at least 5 feet by 6 feet to permit toilet training.

If toilets provided adjacent to patients' rooms are not large enough, a separate training toilet, at least 5 feet by 6 feet, should be provided.

Bedpan facilities.

Bathing facilities:

1 bathtub.

<sup>1</sup> Desirable but not mandatory.

<sup>2</sup> If required by program.

<sup>4</sup> May be combined.

1 shower. (A separate bath room for each sex, containing at least one bathtub and one shower, is recommended. A ratio of one bathtub or one shower for each 10 beds is desirable.)  
 Stretcher and wheelchair parking area.  
 Clean linen storage.  
 Equipment and supply storage.  
 Janitor's closet.

(e) *Service department.*

Dietary facilities:

Kitchen.  
 Dishwashing room.  
 Adequate refrigeration.  
 Garbage disposal facilities.  
 Personnel dining facilities.

Janitors' closet.

Housekeeping facilities:

Clean linen facilities.  
 Soiled linen facilities.  
 If commercial laundry is not available, laundry facilities shall be provided.

Mechanical facilities:

Boiler room.  
 Maintenance facilities—at least a bench in boiler room. In larger Nursing Homes, separate maintenance facilities should be provided.

Incinerator.<sup>1</sup>

Employees' facilities:

Male locker room and toilet.  
 Female locker room and toilet.

Storage:

General storage—15 square feet per bed and to be concentrated in one area.  
 Patients' clothes storage room.  
 Storage for outdoor equipment.<sup>1</sup>

**§ 53.150 Details.**

The following general requirements apply to all hospitals. Conditions in special hospitals, not covered in the general requirements, are specifically noted.

(a) *General requirements for hospitals.*

Door widths: 3 feet 8 inches (3 feet 10 inches preferable) at all:  
 Bedrooms.  
 Treatment rooms.  
 Operating rooms.

X-ray therapy rooms.  
 Delivery rooms.  
 Solariums.  
 X-ray rooms.  
 Physical therapy rooms.  
 Labor rooms.

Door swings: No doors shall swing into the corridor except closet doors.

Corridor widths: 7 feet (8 feet preferred). A greater width should be provided at elevator entrances.

Stair Widths: The width of stairways shall be not less than 3 feet 8 inches. The width shall be measured between handrails where handrails project more than 3½ inches.

Elevators: Platform size—5 feet 4 inches x 8 feet. Door opening—3 feet 10 inches. See also mechanical section.

Laundry chutes: Use optional. Where used 2' 0" minimum diameter.

Nurses' call system: (Does not apply to mental and psychiatric hospitals and mental units in general hospitals.) Call station between each two beds in two-bed rooms and four-bed rooms and one in each one-bed room. Corridor dome light over each nursing room. Dome light and buzzer at nurses' station, utility room and floor pantry.

Fire Safety:

Exit facilities:

All exit facilities shall follow the recommendations of the Building Exits Code of the National Fire Protection Association.

Fire protection facilities:

Other fire protection requirements such as standpipes, sprinklers, chemical fire extinguishers and fire alarm systems shall conform to the requirements of any one of the codes listed in § 53.152(a) (Structural Requirements).

Fire-resistive construction:

See § 53.152(c) for fire-resistive requirements affecting the structural members and connections.

Ray protection: X-ray rooms, surgeries, cystoscopic rooms and other areas containing

<sup>1</sup> Desirable but not mandatory.

X-ray producing equipment, other than mobile equipment, shall have ray protection as recommended in applicable handbooks of the National Bureau of Standards.

Radioisotopes: Rooms or areas where radioisotopes are used or stored, including teletherapy apparatus utilizing Radium, Cobalt-60, or Cesium-137 or other radioisotopes, shall have the ray protection necessary to limit the radiation in occupied areas to those levels required by the Atomic Energy Commission. The methods for determining radiation barriers shall be those established in the applicable handbooks of the National Bureau of Standards.

X-ray equipment: X-ray equipment and installation shall comply with recommendations contained in the National Electrical Code and applicable handbooks of the National Bureau of Standards.

Ceiling heights:

Boiler room:

Not less than 12'0" except that a lesser height may be used for these small buildings which may use a domestic type packaged heating unit. When a boiler is set in a depressed pit area, the height shall be measured from the pit floor.

Laundry:

Not less than 11'0" (a higher ceiling is desirable).

Kitchen:

Not less than 10'0" (a higher ceiling is desirable).

Operating rooms, delivery rooms, Cystoscopic rooms, emergency rooms and similar rooms having ceiling-mounted light fixtures—not less than 9'0" (a higher clearance may be necessary for some surgical lights).

All other rooms except those containing special equipment which may require a greater height, (X-ray, etc.)—not less than 8'0" except that ceiling heights for corridors, storage rooms, patients' room toilets and other minor auxiliary rooms may be lower.

Insulation in ceilings: Ceilings of boiler rooms, kitchens and laundries shall be insulated where the floor directly above them is to be used for hospital purposes.

Parking space: Adequate parking space should be available for all health facilities.

(b) *Chronic disease hospitals, rehabilitation facilities and nursing homes.*

Space allowances: Space allowances shall be consistent with the need in areas used by patients using crutches, wheelchairs or wheel stretchers.

Doors: All doors through which patients will pass shall be at least 8 feet 8 inches wide. Doors at least 3 feet wide will be permitted at individual toilets adjacent to patients' bedrooms.

Corridors: Corridors used by patients shall be at least 8 feet wide. A greater width should be provided at elevator entrances.

Handrails: Handrails will be required on both sides of corridors used by patients in chronic disease hospitals and nursing homes. Handrails are not required in corridors of rehabilitation facilities.

Thresholds: Thresholds at doorways shall be flush.

Telephone alcoves: Telephone alcoves shall be a minimum of 4 feet square. Phone shall be located on a shelf convenient for patients in wheelchairs. Doors to telephone booths are not recommended.

Drinking fountains: Drinking fountains shall be located in corridors of nursing units and treatment areas and lobby. The fountain shall be accessible to patients in wheelchairs.

Brackets: In rehabilitation facilities brackets should be provided adjacent to patients' beds for braces and crutches.

Water closet stalls: Water closet stalls for patient use shall have handrails on both sides. Curtains are recommended in lieu of doors to stalls.

Toilet rooms: Toilet rooms adjacent to patients' rooms shall permit movement of wheelchairs and shall have handrails on both sides.

Hardware: Hardware on water closet enclosures shall be operable from outside.

Lavatories: The front edge of the lavatory for patient use shall be set not less than 22 inches

from the wall to which it is attached.<sup>1</sup> They shall be supported on brackets to allow wheelchairs to slide under.

**Mirrors:** Mirrors shall be arranged for the convenience of patients in wheelchairs as well as patients in a standing position.

**Bathtubs:** Bathtubs shall not be elevated in rehabilitation facilities. It is recommended that bathtubs shall not be elevated in chronic disease hospitals and nursing homes. Handrails shall be provided at all bathtubs.

**Showers:** Showers should be approximately 4 feet square and should have handrails and curtains. Curbs shall be omitted.

(c) *Mental hospitals, psychiatric hospitals and psychiatric units in general hospitals.* The principles of psychiatric security and safety shall be followed throughout. Materials and details of construction shall be such that patients will not be afforded opportunity for escape, suicide, hiding, etc. Care must be taken to avoid projecting sharp corners, exposed piping, heating elements, fixtures, hardware, etc.

(d) *Public health centers and diagnostic or treatment centers.* Width of corridors shall be not less than 5' 0". Greater width preferred. Windows of examination and treatment rooms shall be glazed with obscure glass to insure privacy.<sup>1</sup>

(e) *State public health laboratories.* Provide separate air conditioning or ventilation system for bacteriological and virus laboratories with ample supply and exhaust to function properly with closed windows. Emergency showers shall be provided in chemical laboratories. Each chemical laboratory room shall have a minimum of two exits. All windows must be screened.

## § 53.151 Finishes.

### (a) General.

#### Floors:

The floors of the following areas shall have smooth, waterproof surfaces which are wear resistant:

Toilets.

Baths.

Bedpan rooms.

Floor pantries.

Utility rooms.

Treatment rooms.

Sterilizing rooms.

Janitors' closets.

The floors of the following areas shall be smooth and easily cleaned:

Pharmacies.

Laboratories.

Patient rooms.

The floors of the following areas shall be waterproof, greaseproof, smooth and resistant to heavy wear:

Kitchens.

Butcher shops.

Food preparation.

Formula rooms.

Floors in anesthetizing areas and in rooms used for storage of flammable anesthetic agents in surgical suites shall be conductive as required by the NFPA No. 56—Code for Use of Flammable Anesthetics.

#### Walls:

The walls of the following areas shall have a smooth surface with painted or equal washable finish in light color. At the base, they shall be waterproof and free from spaces which may harbor ants and roaches:

All rooms where food and drink are prepared, served or stored.

The walls of the following areas shall have waterproof painted, glazed or similar finishes to a point above the splash or spray line:

Kitchens.

Sculleries.

Utility rooms.

Baths.

Showers.

Dishwashing rooms.

Janitors' closets.

Sterilizing rooms.

Spaces with sinks.

The walls of the following areas shall have waterproof glazed, painted or similar

<sup>1</sup> Desirable but not mandatory.

surface which will withstand washing to a distance of not less than 5'0":

Operating rooms.

Delivery rooms.

**Ceilings:**

The ceilings of the following areas shall be painted with waterproof paint:

Operating rooms.

Delivery rooms.

All sculleries, kitchens and other rooms where food and drink are prepared.

The ceilings of the following areas shall be acoustically treated:

Corridors in patient areas.

Nurses' stations.

Labor rooms.

Utility rooms.<sup>1</sup>

Floor pantries.

Kitchens.<sup>1</sup>

**(b) State public health laboratory.**

**Floors:**

Resilient, smooth and stain resistant: All laboratories other than chemistry laboratories.

Resilient, smooth and acid resistant: Chemistry laboratories.

Smooth, waterproof, grease-proof, easily cleaned, non-slip, resistant to heavy traffic:

Culture media rooms.

Glasswashing rooms.

Sterilization rooms.

Acid cleaning rooms.

Animal rooms.

**Walls:**

Waterproof, painted, glazed or similar finishes to a point above the splash or spray line. They shall be without cracks, and in conjunction with floors shall be waterproof and free of cracks and spaces which may harbor ants and roaches:

Laboratories.

Incubator rooms.

Sterilizing rooms.

Culture media rooms.

Glasswashing rooms.

Acid cleaning rooms.

Inoculation and operating rooms.

Animal rooms.

Same as above, but finish to reach to ceiling:

Sterile rooms.

Ceilings: Waterproof painted: Sterile rooms.  
Shelves and cabinets: Shelves and cabinets which are used for the storage of food, dishes, and cooking utensils shall be so constructed and mounted that there shall be no openings or spaces which cannot be cleaned and which might harbor vermin or insects. Cabinets which are used for the storage of open food containers and dishes shall be dust tight.

*(c) Chronic disease hospitals, rehabilitation facilities and nursing homes.*

Wainscot: A wainscot of durable material should be provided in all rooms used by patients for protection of walls against damage caused by wheelchairs, stretchers and carts. Such a wainscot is desirable but not mandatory in chronic disease hospitals and nursing homes.

**§ 53.152 Structural.**

*(a) Codes.* In addition to compliance with the standards set forth in this subpart, all applicable local and State building codes and regulations must be observed. In areas which are not subject to local or State building codes, the recommendations of any one of the following national codes shall apply insofar as such recommendations are not in conflict with the standards set forth in this subpart.

1. National Building Code: National Board of Fire Underwriters, 85 John Street, New York 38, New York.

2. Basic Building Code: Building Officials Conference of America, 1525 East 53d Street, Chicago 15, Illinois.

3. Southern Building Code: Southern Building Code Congress, Brown-Marx Building, Birmingham, Alabama.

4. Uniform Building Code: International Conference of Building Officials, 610 South Broadway, Los Angeles 14, Calif.

*(b) Design data.* (1) *General.* The buildings and all parts thereof shall be of sufficient strength to support all dead, live and lateral loads without exceeding the working stresses permitted for the materials of their construction in the applicable code.

<sup>1</sup> Desirable but not mandatory.

(2) *Special.* Special provisions shall be made for machine or apparatus loads which would cause a greater stress than that produced by the specified minimum live load, with due consideration of vibration or impact resulting from operation of such equipment (e.g., some portable X-ray machines weigh as much as 1,000 pounds). Consideration shall be given to structural members and connections of structures which may be subject to hurricanes, tornadoes and earthquakes. Suitable allowance shall be made for future partition changes.

(3) *Live loads.* The following unit live loads shall be taken as the minimum uniformly distributed live loads for the occupancies listed:

Hospital wards, bedrooms, and all adjoining service rooms which comprise a typical nursing unit (except solaria and corridors)—40 p.s.f. Solaria, corridors in nursing units and all corridors above the first floor, operating suites, examination and treatment rooms, laboratories, toilets and locker rooms—60 p.s.f.

Corridors on first floor, waiting rooms and similar public areas, offices, conference room, library, kitchen and radiographic room—80 p.s.f.

Stairways, laundry, large rooms used for dining, recreation or assembly purposes, work shops—100 p.s.f.

Records file room, storage, supply—125 p.s.f.

Mechanical equipment room (unless actual equipment loads are accurately determined)—150 p.s.f.

Roofs (except use increased value where snow and ice may occur)—20 p.s.f.

Wind—as required by local conditions, but not less than—15 p.s.f.

(c) *Construction including fire resistive requirements.* (1) Foundations shall rest on natural solid ground and shall be carried to a depth of not less than one foot below the estimated frost line or shall rest on leveled rock or load-bearing piles when solid ground is not encountered. Footings, piers, and foundation walls shall be adequately protected against deterioration from the action of ground water. Proper bearing values for the soil shall be established in accordance with recognized standards.

(2) One-story buildings shall be constructed

of not less than one-hour fire-resistive construction throughout except as follows:

(i) Boiler rooms and rooms used for the storage of combustible materials shall be of two-hour fire-resistive noncombustible construction.

(ii) Interior non-load-bearing partitions, other than those enclosing corridors and vertical shafts, may be of noncombustible construction without a fire-resistive rating.

(3) Structures built of other than noncombustible materials shall adhere to the floor area restrictions set forth in any one of the national codes listed in paragraph (a) of this section. For purposes of evacuation, the window sills of one-story buildings constructed of other than non-combustible materials shall be not more than six feet above the adjacent ground level.

(4) Buildings more than one story in height shall be constructed of non-combustible materials, using a structural framework of reinforced concrete or structural steel except that load-bearing masonry walls and piers may be utilized for buildings up to and including three stories in height. The fire-resistive requirements of the various building elements shall follow the requirements of any one of the four national codes listed in paragraph (a) of this section except for the modifications listed below:

(i) Corridor partitions shall be of one-hour fire-resistive construction.

(ii) Walls enclosing stairways, elevators, laundry and trash chutes, and other vertical shafts, boiler rooms and rooms used for storage of combustible materials shall be of two-hour fire-resistive construction.

(5) Interior finish of all exit ways, storage rooms and all areas of unusual fire hazard shall have a flame spread rating of less than 20.

(6) Interior finish of patient rooms, patient day rooms and other areas occupied by patients shall have a flame spread rating of less than 75.

(7) Interior finish of other areas shall have a flame spread rating of less than 75, except that ten percent of the aggregate wall and ceiling areas of any space may have a flame spread rating up to 200.

(8) Interior finish materials shall be classified in accordance with their average flame spread rating on the basis of tests conducted in accordance with ASTM Standard No. E 84.

**§ 53.153 Mechanical and electrical.**

(a) *Heating; steam systems and ventilation*—(1) *Codes.* The heating system, steam system, boilers, ventilation system, and air conditioning system shall be furnished and installed to meet all requirements of the local and State codes and regulations, and the regulations of the National Board of Fire Underwriters and the minimum general standards as set forth in this section. Where there is no local or State boiler code, the recommendations of the A. S. M. E. shall apply. Gas fired equipment shall comply with the regulations of the American Gas Association.

(2) *Boilers.* Boilers shall have the necessary capacity when operating at normal rating to supply the heating system, hot water, and steam operated equipment, such as sterilizers, laundry and kitchen equipment. Spare boiler capacity shall also be provided in a separate unit to replace any boiler which might break down, except that spare boiler capacity for heating will not be required in design temperature zone +20° F. or higher as shown by the current edition of the ASHRAE Guide. Boilers which supply high pressure steam to sterilizers, kitchens, laundry, etc., shall meet the requirements of the city and State boiler codes for 125 pounds working pressure. It is desirable to operate boilers, supplying steam for laundries, at not less than 105 pounds pressure while boilers for sterilizers and kitchen may operate at 50 pounds pressure.

(3) *Heating system.* The building shall be heated by a hot water, steam, or equal type heating system.

(4) *Steam system.* A system of steam and return mains and appurtenances shall be provided to supply all equipment which requires steam heat.

(5) *Boiler accessories.* Boiler feed pumps, return pumps and circulating pumps shall be furnished in duplicate, each of which has a capacity to carry the full load. Blow off valves, relief valves, non-return valves, injectors and fittings shall be provided to meet the requirements of the city and state codes. Where no city or state codes are in force the recommendations of the ASME shall apply.

(6) *Temperatures.* It shall be possible to

maintain a temperature of 70° F. in each room and occupied space except that in operating and delivery rooms and nurseries it shall be 75° F. In spaces where radiant heat is used, the minimum temperatures specified may be reduced to maintain an equivalent comfort level. Radiators and convectors, if used, shall be provided with hand control valve except where individual room automatic control is provided.

(7) *Piping.* Steam and hot water piping may be copper pipe and fittings, standard weight steel or iron pipe and cast iron fittings. Pipe used in heating and steam systems shall not be smaller sizes than prescribed by the latest edition of the ASHRAE Guide. The ends of all steam mains and low points in steam mains shall be dripped.

(8) *Valves.* Steam, return and heating risers, steam, return and heating mains shall be controlled separately by a valve. Each steam and return main shall be valved. Each piece of equipment supplied with steam shall be valved on the supply and return ends.

(9) *Thermostatic control.* The heating system shall be thermostatically controlled in one or more zones.

(10) *Auxiliary heat.* The heating system serving operating rooms, delivery rooms, recovery rooms, and nurseries shall be designed so that heat is available on a year round basis.

(11) *Coverings.* Boilers and smoke breeching shall be insulated with covering not less than 1-inch magnesia blocks and ½-inch plastic asbestos finish. All high pressure steam and high pressure return piping shall be insulated with covering not less than the equivalent of 1-inch four ply asbestos covering. Heating mains in the boiler room, in unheated spaces, unexcavated spaces, and where concealed, shall be insulated with covering not less than 1-inch asbestos air cell.

(12) *Ventilation.* (i) Rooms which do not have outside windows and which are used by patients or hospital personnel, such as utility rooms, toilets, bed pan rooms, baths, sterilizer rooms, sterilizer equipment chambers and food storage rooms shall be provided with forced or suitable ventilation to change the air at least once every six minutes.

(ii) Kitchens, morgues and laundries which



are located inside the hospital building shall be ventilated by exhaust systems which will discharge the air above the main roof or 50' 0" from any window. The ventilation of these spaces shall comply with the State or local codes but if no code governs, the air in the work spaces shall be exhausted at least once every six minutes with the greater part of the air being taken from the flat work ironer and ranges. Air from the laundry sorting area shall be discharged with no recirculation. Rooms used for the storage of combustible anesthetic agents, paints and other highly flammable materials shall be ventilated to the outside air with intake and discharge ducts. Oxygen storage and oxygen manifold rooms shall comply with the regulations set forth in the latest edition of the NFPA-56.

(iii) The operating and delivery rooms shall be provided with a supply ventilating system with heaters and humidifiers which will change the air at least eight times per hour by supplying fresh filtered air humidified to prevent static. No recirculation will be permitted. The air shall be removed from these rooms by forced system of exhaust. The adjoining sterilizing rooms and sterilizing equipment chambers shall be provided with exhaust ventilation.

(13) *Incinerators:* (i) An incinerator shall be installed in each hospital. The incinerator shall be designed to burn completely 60 percent wet garbage without objectionable smoke or odor. Where garbage is removed from the premises or disposed of by other means, incinerators will be required for the disposal of dressings, contagious and infectious materials, amputations and general rubbish. Rubbish incinerators shall be designed to completely burn 50 percent wet rubbish without objectionable smoke or odor. Gas- or oil-fired incinerators are desirable. Incinerators with capacities up to 500 pounds shall have the enclosing walls of combustion chambers lined with fire brick not less than 4½ inches thick. Incinerators of greater capacity shall have not less than 9-inch fire brick lining. The gases shall be carried to a point above the roof of the hospital. Flue fed type incinerators which have an identical refuse chute and smoke flue shall not be installed in hospitals or medical facilities.

(Sec. 215, 58 Stat. 690, as amended; 42 U.S.C. 216. Interpret or apply sec. 622, 60 Stat. 1042; 42 U.S.C. 201e.)

(ii) Incinerators for diagnostic or treatment facilities need not conform in all respects to the above requirements but shall be of such design, construction and capacity to fulfill the needs of such facilities.

(14) *Tests.* The systems shall be tested to demonstrate to the satisfaction of the State agencies having jurisdiction that: The boilers will carry the full load with one boiler in reserve, that the steam supply to all steam heated equipment is ample, that the ventilating equipment meets the minimum requirements and that all systems circulate satisfactorily without leaks or noise.

(15) *Health centers, nurses' residences, laboratories, diagnostic or treatment centers, rehabilitation facilities and nursing homes.* (i) A spare boiler may not be required for health centers, nurses' residences, laboratories, diagnostic or treatment centers, rehabilitation facilities and nursing homes. Incinerators are recommended in health centers, nurses' residences, laboratories, rehabilitation facilities and nursing homes.

(ii) Separate special ventilation or air-conditioning systems are required for the bacteriological and virus laboratories.

(16) *Mental hospitals.* Radiators, grilles, pipes, valves and equipment shall be so located that they are not accessible to patients. Hot air heating may be used for spaces occupied by mental patients.

(b) *Plumbing and drainage.* All parts of the plumbing systems shall comply with all applicable local and State codes and the requirements of the State Department of Health and the minimum general standards as set forth in this paragraph. Where no State or local codes are in force or where such codes do not cover special hospital equipment, appliances, and water piping, the National Plumbing Code ASA-A40.8-1955 shall apply.

(1) *Water service.* (i) The water supply available for the hospital shall be tested and approved by the State Department of Health.

(ii) The water service shall be brought into the building to comply with the requirements of the local water department and shall be free of cross connections.



(2) *Hot water heaters and tanks.* (i) The hot water heating equipment shall have sufficient capacity to supply 6½ gallons of water at 125° F. per hour per bed for hospital fixtures, 4 gallons of water at 180° F. per hour per bed for kitchen and 4½ gallons of water at 180° F. per hour per bed for laundry.

(ii) The hot water storage tank or tanks shall have a capacity equal to 80 percent of the heater capacity.

(iii) Where direct fired hot water heaters are used they shall be of an approved high pressure type. Submerged steam heating coils shall be of copper. Storage tanks shall be of non-corrosive metal or be lined with non-corrosive material to comply with the A.S.M.E. Code for pressure vessels. Tanks and heaters shall be fitted with vacuum and relief valves, and where the water is heated by coal or gas they shall have thermostatic relief valves. Heaters shall be thermostatically controlled.

(3) *Water supply systems.* (i) From the cold water service and hot water tanks, cold water and hot water mains and branches shall be run to supply all plumbing fixtures and equipment which require hot or cold water or both for their operation. Pipes shall be sized to supply water to all fixtures with a minimum pressure of 15 pounds at the top floor fixtures during maximum demand periods. All plumbing fixtures except water closets, urinals, bedpan washers and drinking fountains shall have both hot and cold water supplies. Every supply outlet or connection to a fixture or appliance shall be protected against back flow in accordance with the provisions of standards for air gaps

backflow preventers as provided by National Plumbing Code ASA-A40.8-1955.

The use of fixture or appliance will be supplied to all fixtures, open tanks, etc., shall be introduced through a gap between the water supply and level of the fixture. No connections, etc. which will permit backflow.

Water circulating mains and risers from the hot water storage tank to directly below the highest fixture at the branch main. Where the building has 3 stories, each riser shall be Water pipe sizes shall be equal to required by the National Plumbing Code ASA-A40.8-1955.

(4) *Drainage system.* All fixtures and equipment shall be connected through traps to soil and waste piping and to the sewer. Indirect waste connections shall be provided for devices or fixtures in which food, drink, water and ice are processed or stored, dishwashing machines, sterilizers, stills and equipment requiring cooling water. All shall conform to the requirements of the National Plumbing Code ASA-A40.8-1955.

(5) *Rain water drains.* Leaders shall be provided to drain the water from roof areas to a point from which it cannot flow into the basement or areas around the building. Courts, yards, and drives which do not have natural drainage from the building shall have catch basins and drains to low ground, storm water system, or dry wells. Where dry wells are used they shall be located at least 20' 0" from the building.

(6) *Gas piping.* Gas appliances shall be approved by the American Gas Association and shall be connected in accordance with the requirements of the company furnishing the gas. Gas outlets shall not be provided in patients' bedrooms.

(7) *Oxygen systems.* Where oxygen systems are installed the oxygen piping, outlets, manifolds, manifold rooms and storage rooms shall be installed in accordance with the requirements of N.F.P.A. Bulletins No. 56 and No. 565.

(8) *Pipe.* The building drain, to a point 5' 0" from the building, shall be of cast iron. Soil stacks, drains, vents, waste lines, and leaders shall be of copper, cast iron or steel except drain lines in back-fill or soil shall be of cast iron. Oxygen lines shall be of copper tubing not lighter than type "K" or I.P.S. red brass with fittings of brass or copper. Drains from sinks which use chemicals shall be of approved acid resistant material. Gas piping shall be of black iron with malleable fittings or copper tubing.

(9) *Valves.* Each main, branch main, riser and branch to a group of fixtures of the water systems shall be valved.

(10) *Insulation.* (i) Tanks and heaters shall be insulated with covering equal to 1" 4-ply air cell.

(ii) Hot water and circulating pipes shall be insulated with covering equal to canvas jacketed 3-ply asbestos air cell.

(iii) Cold water mains in occupied spaces and in store rooms shall be insulated with canvas jacketed felt covering to prevent condensation. All pipes in outside walls shall also be insulated to prevent freezing.

(11) *Stand pipe system.* The stand pipe system shall be installed as required by the local and State departments having jurisdiction. Where no local or State codes are in force, the stand pipe system shall comply with the requirements of the National Board of Fire Underwriters.

(12) *Sprinkler system.* To reduce the danger from fire, it is desirable to provide automatic sprinkler systems in those areas which are considered hazardous from a fire safety point of view. Such hazardous areas may include the soiled linen rooms, basement corridors, paint shops, wood working shops, trash rooms, storage rooms, accessible attics, laundry and trash chutes, and entire nonfireproofed buildings.

(13) *Plumbing fixtures.* (i) The material used for plumbing fixtures shall be of an approved non-absorptive acid resisting material.

(ii) Water closets in and adjoining patients' areas shall be of a quiet operating type.

(iii) Flush valves shall be designed for quiet operation with non-return stops, back flow preventers and silencers.

(iv) Patient lavatories, service lavatories, and sinks which may be used for filling pitchers shall have the spout mounted so that it is a minimum distance of 5 inches above the flood rim of the fixture. All lavatories and sinks used by patients, doctors, nurses, and food handlers shall be trimmed with valves which can be operated without the use of the hands. Wrist, knee and foot action valves meet this requirement. If wrist action valves are used on patient lavatories the blade handles shall not exceed 4½ inches in length.

(Sec. 215, 58 Stat. 690, as amended; 42 U.S.C. 210. Interpret or apply sec. 622, 60 Stat. 1042, sec. 653, 68 Stat. 463; 42 U.S.C. 201e, 201u)

(14) *Drinking fountains.* Drinking fountains shall comply with the A.S.A. Z4.2-1942.

(15) *Tests.* (i) All soil, waste, vent, and

drain lines shall be tested by water or air test before they are built in.

(ii) A smoke or chemical test shall be applied after fixtures have been set. Water pipe shall be hydraulically tested to a pressure equal to twice the working pressure. The tests shall demonstrate to the satisfaction of the State Agency that there are no leaks, that hot water is circulating satisfactorily, that all traps are properly vented, that there is ample supply of hot and cold water to all fixtures, that no fixture or equipment can be back syphoned and that there are no backflow connections.

(16) *Sterilizers.* Sterilizers and autoclaves shall be provided of the required types and necessary capacity to adequately sterilize instruments, utensils, dressings, water, operating room material, such as gloves, sutures, etc., and as required for laboratories. The sterilizers shall be of recognized hospital types with approved controls and safety features.

(17) *Mental, psychiatric, tuberculosis and chronic disease hospitals, rehabilitation facilities and nursing homes.* (i) Plumbing fixtures which require hot water and which are accessible to patients shall be supplied with water which is thermostatically controlled to provide a maximum water temperature of 110° F. at the fixture.

(ii) Special consideration shall be given to piping, controls, and fittings of plumbing fixtures as required by the types of mental patient and the doctor in charge of planning. No pipes or traps shall be exposed and fixtures shall be substantially bolted through walls. Generally, for disturbed patients, prison type water closets without seats shall be used and shower and bath controls shall not be accessible to patients.

(iii) The hot water heat and tank capacities for laundries in T. B. and mental hospitals may be reduced to 40 percent of that required for general hospitals.

(18) *Laboratories, nurses' residences and health centers.* (i) Emergency quick acting cold water showers are required at convenient points in chemical laboratories.

(ii) Only one system of hot water will be required in laboratories, nurses' residences and health centers and the elbow or knee action lava-

tory and sink faucet handles will be required only in clinical rooms of health centers.

(c) *Electrical installations*—(1) *Codes and regulations.* The installation of electrical work and equipment shall comply with all local and State codes and laws applicable to electrical installations and the minimum general standards as set forth in this paragraph. Where such codes and laws are not in effect or where they do not cover special installations the National Electrical Code and standards referenced therein which are applicable shall apply. The regulations of the local utility company shall govern service connections. All materials shall be new and shall equal standards established by the Underwriters Laboratories, Inc. Certificates of approval shall be issued by these departments having jurisdiction before the work will be approved for final payment.

(2) *Service.* Connections from the service mains, with meter connections and service switches shall be installed as required by the Public Service Company.

(3) *Feeders and circuits.* Separate power and light feeders shall be run from the service to a main switchboard and from there sub-feeders shall be provided to the motors and power and light distributing panels. Where there is only one service feeder, separate power and light feeders from the service entrance to the switchboard will not be required. From the power panels feeders shall be provided for large motors, and circuits from the light panels shall be run to the lighting outlets. Large heating elements shall be supplied by separate feeders from the power or light service as directed by the local public service company. Independent feeders shall be furnished for X-ray equipment.

(4) *Switchboard and power panels.* Circuit breakers or dead front type fused switches shall be installed to protect all feeders and sub-feeders. Motors shall be connected with breakers or fused switches.

(5) *Light panels.* Light panels shall be provided on each floor for the lighting circuits on that floor. Light panels shall be located near the load centers not more than 100' 0" from the farthest outlet.

(6) *Lighting outlets and switches.* All occupied areas shall be adequately lighted as required by duties performed in the space. Patients' bedrooms shall have as a minimum general illumination a night light and a patient's reading light. The outlets for general illumination and night lights shall be switched at the door. Switches in patients' rooms shall be of an approved mercury or equal, quiet operating type, or shall be placed in the corridor. Operating and delivery rooms shall have general illumination and special lights for the tables each on an independent circuit.

(7) *Equipment and installation in hazardous areas.* All electrical equipment and installation in operating, delivery, emergency, anesthesia storage and anesthesia induction rooms shall comply with National Fire Protection Association Code NFPA No. 56.

(8) *X-ray film illuminator.* Each operating room shall have a film illuminator.

(9) *Receptacles (convenience outlets).* Receptacles suitable for the service shall be located where plug-in service is required. Each bedroom shall not have less than two duplex receptacles, with at least one receptacle near the head of each bed. Polarized receptacles for special equipment shall be installed where required. Grounding type receptacles shall be installed not more than 50 feet apart in all nursing unit corridors. At least three three-pole grounded receptacles shall be installed in each operating, delivery, and emergency room.

(10) *Emergency lighting.* Emergency lighting shall be provided for exits, stairs, and patient corridors which shall be supplied by an emergency service, an automatic emergency generator or battery with automatic switch. Operating and delivery room lights shall be connected with an automatic transfer switch which will throw the circuits to the emergency service in case of current failure. Should an emergency service from the street be used, it shall be from a generating plant independent of that used for the main electric service.

(11) *Nurses call.* Each patient shall be furnished with a nurses' call station which will register a call from the patient; at the corridor door, at the nurses' station, and in each pantry

and utility room of the nursing unit. A duplex unit may be used for 2 patients. Indicating lights shall be provided at each station where there are more than two beds in a room. Nurses' call stations will not be required for beds which are used only for children. Operating, delivery and recovery rooms, rooms used for children and nurseries shall have one emergency call each for use of the nurse. Wiring for nurses' call systems shall be installed in conduit.

(12) *Lighting fixtures.* Lighting fixtures shall be furnished for all lighting outlets. They shall be of a type suitable for the space. Should ceiling lights be used in patients' rooms, they shall be of a type which does not shine in the patients' eyes.

(13) *Fire alarms.* A manually operated fire alarm system shall be installed in each hospital, rehabilitation facility, and nursing home. It is recommended that this system be coded and electrically supervised. The alarm system shall comply with applicable local codes, or in the absence of such codes the NFPA 101—"Building Exits Code" and NFPA 72—"Standard for Proprietary Protective Signalling Systems" shall apply.

(14) *Clocks.* A clock system is desirable but not mandatory. Where provided, it should be complete with master clock and time indicator clocks in administrative offices, main lobby, and work areas as required.

(15) *Tests.* Lighting fixtures, all wiring and equipment shall be tested to show that it is free from grounds, shorts, or open circuits, that motors rotate correctly and that all equipment operates as specified.

(16) *Health centers, nurses' residences, laboratories, diagnostic or treatment facilities, and separate rehabilitation facilities for outpatients only.* Emergency lighting and call systems will not be required in health centers, nurses' residences, laboratories, diagnostic or treatment facilities and separate rehabilitation facilities for outpatients only except as provided for by local and State codes.

(17) *Mental hospitals.* (i) No lighting fixtures, switches, receptacles or electrical equipment shall be accessible to mental patients.

(ii) Nurses' call systems will not be required in areas occupied by mental patients.

(d) *Elevators and dumbwaiters*—(1) *Codes.* Elevators and dumbwaiters shall comply with all local and State codes, American Standard Safety Code for Elevators, Dumbwaiters, and Escalators (A17.1—1960), The National Board of Fire Underwriters, the National Electrical Code, and the minimum general standards as set forth herein.

(2) *Number of elevators.* (i) Any hospital, rehabilitation facility, or nursing home with patients on one or more floors above the first or where the operating or delivery rooms are above the first floor shall have at least one electric motor driven hospital-type elevator with car inside dimensions of at least 5'0" wide by 7'6" deep and door clear opening of not less than 3'8". Hospitals, rehabilitation facilities, or nursing homes with a bed capacity of from 60 to 200 above the first floor shall have not less than two such elevators. Hospitals with a bed capacity of from 201 to 350 above the first floor shall have not less than three such elevators. Elevators provided in addition to these minimums may be of any type considered suitable.

(ii) Elevator cars shall be constructed of all noncombustible material.

(3) *Controls.* Elevators shall have either generator field control or multivoltage control where speed is greater than 150 feet per minute. Elevators with speeds of more than 350 feet per minute shall be the gearless type. Elevators shall have automatic leveling of the two-way automatic maintaining type with accuracy within plus or minus 1/2".

stopping speed of not more than 50 feet per minute. Operation shall be by momentary contact pushbutton.

(6) *Tests.* Elevator and dumbwaiter machines shall be tested for speed and load with and without loads in both directions. Elevators shall be tested for leveling and shall be given overspeed tests as specified in A17.1—1960 American Standard Safety Code for Elevators, Dumbwaiters, and Escalators.

(e) *Refrigeration*—(1) *Codes.* (i) The refrigerators and refrigerating systems shall be furnished and installed to meet all requirements of the local and State codes and regulations, the National Board of Fire Underwriters, and the minimum general standards as set forth in this paragraph.

(ii) This section shall include portable refrigerators, built-in refrigerators, garbage refrigeration, ice-making and refrigerator equipment, morgue boxes.

(2) *Box construction.* (i) Boxes shall be insulated with waterproof, nonabsorbent, verminproof insulation. For the portable boxes, the insulation in the doors and walls shall be equal to 2-inch cork. Outer walls and doors of the walk-in boxes shall have insulation equal to 4-inch cork. Boxes shall be lined with nonabsorbent sanitary material which will withstand the heavy use to which it will be subjected and constructed so as to be easily cleaned.

(ii) Refrigerators of adequate capacity shall be provided in all kitchens and other preparation centers, where perishable foods will be stored.

(iii) In the main kitchen, a minimum of two separate sections or boxes shall be provided, one for meats and dairy products, and one for general storage.

(3) *Refrigerator machines.* (i) Toxic, "irritant", or inflammable refrigerants shall not be used in refrigerator machines located in buildings occupied by patients.

(ii) The compressors and evaporators shall have sufficient capacity to maintain temperatures of 35° F. in the meat and dairy boxes, and 40° F. in the general storage boxes when the boxes are being used normally. Compressors shall be automatically controlled.

(4) *Tests.* Compressors, piping, and evaporators shall be tested for leaks and capacity.

(f) *Kitchen equipment*—(1) *Codes.* The kitchen equipment shall be so constructed and installed as to comply with the applicable local and State laws, codes, regulations and requirements, and with the applicable sanitation standards of Public Health Bulletin No. 37, entitled "Ordinance and Code Regulating Eating and Drinking Establishments, recommended by the U.S. Public Health Service," and with the minimum general standards set forth in this section.

(2) *Equipment.* (i) The equipment shall be adequate and so arranged as to enable the storage, preparation, cooking, and serving of food and drink to patients, staff and employees to be done in an efficient and sanitary manner. The equipment shall be selected and arranged in accordance with the types of food service adopted for the hospital.

(ii) Adequate cabinets or other facilities shall be provided for the storage or display of food, drink, and utensils, and shall be designed so as to protect them from contamination by insects, rodents, other vermin, splash, dust, and overhead leakage.

(iii) Adequate facilities shall be provided for the washing and bactericidal treatment of utensils used for eating, drinking, and food preparation. Where utensils are to be washed by hand, there shall be provided an adequate sink equipped with heating facilities to maintain a water temperature of at least 170° F. in the bactericidal treatment compartment throughout the dishwashing period. Where utensils are to be washed by machine, there shall be provided facilities for supplying to the dishwashing machine an adequate supply of rinse water at 170° F., measured at the rinse sprays, throughout the dishwashing period. All tables, shelves, counters, display cases, stoves, hoods, and similar equipment shall be so constructed as to be easily cleaned and shall be free of inaccessible spaces providing harborage for vermin. Where there is not sufficient space between equipment and the walls or floor to permit easy cleaning, the equipment shall be set tight against the walls or floor and the joint

properly sealed. All utensils and equipment surfaces with which food or drink comes in contact shall be of smooth, not readily corrodible material free of breaks, corrosion, open seams or cracks, chipped places, and V-type threads. All surfaces with which food or drink comes in contact shall be easily accessible for inspection and cleaning and shall be self-draining, and shall not contain or be plated with cadmium or lead. All water supply and waste line connections to kitchen equipment shall be installed in compliance with the plumbing requirements of these standards.

(g) *Laundry*—(1) *Codes*. (i) The laundry equipment shall be designed and installed to comply with all local and State codes and laws, and the requirements of the State Department of Health and the minimum general standards as set forth in this section.

(ii) Where laundries are provided they shall be complete with washers, extractors, tumblers, ironer and presses which shall be provided with all safety appliances and sanitary requirements.

(2) *Washers*. There shall be at least two washers which shall have a combined rated capacity of not less than 12 pounds of dry laundry per day per patient bed, when operating not more than 40 hours per week.

(3) *Ironer*. Provide one flat work ironer with a capacity equal to 70 percent of the washer capacity when operating 40 hours per week.

(4) *Extractor*. There shall be not less than one extractor with a daily capacity equal to that given above for the washers and for hospitals with more than 100 beds there shall be two extractors.

(5) *Tumbler*. Provide a minimum of one tumbler with a rated capacity equal to 25 percent of the washers, when operating 40 hours per week.

(6) *Presses*. For finished work provide not less than 1 nurses uniform unit consisting of 3 presses or one utility unit with 2 presses which shall be increased for the larger hospitals.

(7) *Wash tubs*. Provide 2 wash tubs.

(8) *Mental and tuberculosis hospitals*. The

capacity per bed of laundry equipment for tuberculosis and mental hospitals shall be 40 percent of that required for general hospitals.

#### § 53.154 Preparation of plans, specifications and estimates.

(a) *General*. (1) The requirements contained in this section have been established for the guidance of the applicant and the architect to provide a standard method of preparation of drawings, specifications and estimates.

(2) It is expected that the applicant will find it advantageous to submit the material through the State Agency in three stages for its recommendation and approval. However, the applicant may, if he so elects, combine the first two stages.

(3) If the data required under stage 3 is available, it may be submitted without the drawings required under stages one and two.

(4) Copies of the final working drawings and specifications previously submitted under stage three will be submitted for approval with the formal application for the project. The requirements for the material submitted at each of the three stages are as follows:

##### (b) *Drawings and specifications*.

(1) *(First stage) program and schematic plans*—(i) *Program*: (a) List in outline form the rooms or spaces to be included in each department, explaining the functions or services to be provided in each, indicating the approximate size, the number of personnel and the kind of equipment or furniture it will contain. Note any special or unusual services or equipment to be included in the facility.

(b) If a hospital project, submit a schedule showing the total number of beds, their distribution in room and in the services, such as medicine, surgery, obstetrics, etc.

(ii) *Schematic plans*: Single line drawings of each floor showing the relationship of the various departments or services to each other and the room arrangement in each department. The name of each room should be noted. The proposed roads and walks, service and entrance courts, parking and orientation may be shown on either a small plot plan or the 1st floor plan.



Simple vertical space diagram should be submitted at this stage.

(iii) Construction outline: A brief description of the type of construction.

(iv) Description of site: If a survey has been made, a plat shall be submitted at this time, if not, it should be submitted with the Preliminary Plans (Second Stage). In lieu of a plat of the survey, a description of the site may be submitted at this time. This shall note the general characteristics of the site, easement, availability of electricity, water and sewer lines, main roadway approaches, direction of prevailing breezes, orientation, etc. A map indicating location of the hospital in its geographic area with particular reference to recommendation given under § 53.133, should be submitted.

(v) Preliminary cost estimates.

(2) (*Second stage*) preliminary plans, elevations, and outline specifications. (i) (a) Development of the preliminary sketch plans indicating in more detail the assignment of all spaces, size of areas and rooms, and including single line layouts of air conditioning and ventilation ducts, heating and steam mains, hot and cold water systems, and soil and waste lines. Indicate in outline the fixed and movable equipment and furniture.

(b) The plans shall be drawn at a scale sufficiently large to clearly present the proposed design.

(c) The total floor area shall be computed and shown on the drawings.

(d) The drawings shall include a plan for each floor, including the basement or ground floor, roof plan, approach plan showing roads, parking areas, sidewalks, etc., elevations of all facades, and sections through the building. Mechanical drawings shall show (1) single line layouts of all air conditioning and ventilation duct systems, (2) layout of heating, chilled water and steam mains, (3) location of heating, ventilation and cooling units, (4) layout of cold and hot water supply and soil and waste systems, (5) layouts of oxygen, nitrous oxide, suction and special piping systems, (6) scale layout of boiler and other equipment rooms, including main pieces of equipment, (7) riser diagrams for the enumerated systems shall be shown for multistory construction.

(ii) Outline specifications shall provide a

general description of the construction, including interior finishes; acoustical material, its extent and type; extent of conductive floor covering. Description of the type of pipe and fittings for all plumbing, heating, ventilation and air conditioning systems. Description of the air conditioning, heating and ventilation systems and their controls. Description of the steam heated equipment such as sterilizers, kitchen and laundry equipment, and the type of elevators.

(iii) Revised cost estimates.

(3) (*Third stage*) working drawings and specifications. (i) All working drawings shall be well prepared so that clear and distinct prints may be obtained; accurately dimensioned and include all necessary explanatory notes, schedules and legends. Working drawings shall be complete and adequate for contract purposes. Separate drawings shall be prepared for each of the following branches of work:

Architectural, structural, mechanical, electrical. They shall include or contain the following:

(a) *Architectural drawings.* (1) Approach plan showing all new topography, newly established levels and grades, existing structures on the site (if any), new buildings and structures, roadways, walks, and the extent of the areas to be seeded. All structures and improvements which are to be removed under the construction contract shall be shown. A print of the survey shall be included with the working drawings for the information of bidders only. The survey shall not be made a contract drawing.

(2) Plan of each floor and roof.

(3) Elevations of each facade.

(4) Sections through building.

(5) Scale and full size details as necessary; scale details at one and one-half (1½) inches to the foot may be necessary to properly indicate portions of the work. Full size details may be prepared after award of construction contract.

(6) Schedule of finishes.

(b) *Equipment drawings.* Large scale drawings of typical and special rooms indicating all fixed equipment and major items of furniture and movable equipment. The furniture and movable equipment will not be included in the

construction contract but should be indicated by dotted lines.

(c) *Structural drawings.* (1) Plans for foundations, floors, roofs and all intermediate levels shall show a complete design with sizes, sections, and the relative location of the various members. Schedule of beams, girders and columns.

(2) Floor levels, column centers, and offsets shall be dimensioned.

(3) Special openings and pipe sleeves shall be dimensioned or otherwise noted for easy reference.

(4) Details of all special connections, assemblies and expansion joints shall be given.

(5) Notes on design data shall include the name of the governing building code, values of allowable unit stresses, assumed live loads, wind loads, earthquake load, and soil-bearing pressures.

(6) For special structures, a stress sheet shall be incorporated in the drawings showing:

(i) Outline of the structure.

(ii) All load assumptions used.

(iii) Stresses and bending moments separately for each kind of loading.

(iv) Maximum stress and/or bending moment for which each member is designed, when not readily apparent from (iii).

(v) Horizontal and vertical reactions at column bases.

(d) *Mechanical drawings.* These drawings with specifications shall show the complete heating, steam piping and ventilation systems; plumbing, drainage and stand pipe systems; and laundry.

(1) *Heating, steam piping and ventilation.*

(i) Radiators and steam heated equipment, such as sterilizers, warmers and steam tables.

(ii) Heating and steam mains and branches with pipe sizes.

(iii) Diagram of heating and steam risers with pipe sizes.

(iv) Sizes, types and heating surfaces of boilers, furnaces, with stokers and oil burners, if any.

(v) Pumps, tanks, boiler breeching and piping and boiler room accessories.

(vi) Air conditioning systems with refrigerators, water and refrigerant piping, and ducts.

(vii) Exhaust and supply ventilating systems with steam connections and piping.

(2) *Plumbing, drainage and stand pipe systems.* (i) Size and elevation of: Street sewer, house sewer, house drains, street water main and water service into the building.

(ii) Location and size of soil, waste, and vent stacks with connections to house drains, fixtures and equipment.

(iii) Size and location of hot, cold and circulating mains, branches and risers from the service entrance and tanks.

(iv) Riser diagram to show all plumbing stacks with vents, water risers and fixture connections.

(v) Gas, oxygen and special connections.

(vi) Standpipe system.

(vii) Plumbing fixtures and fixtures which require water and drain connections.

(3) *Elevators and dumbwaiters.* Shaft details and dimensions, size car platform and doors; travel, pit and machine room.

(4) Kitchens, laundry, refrigeration and laboratories shall be detailed at a satisfactory scale to show the location, size and connection of all fixed and movable equipment.

(e) *Electrical drawings.* Drawings shall show all electrical wirings, outlets, and equipment which require electrical connections.

(1) Electrical service entrance with service switches, service feeders to the public service feeders and characteristics of the light and power current. Transformers and their connections if located in the building, shall be shown.

(2) Plan and diagram showing main switchboard, power panels, light panels and equipment. Feeder and conduit sizes shall be shown with schedule of feeder breakers or switches.

(3) Light outlets, receptacles, switches, power outlets and circuits.

(4) Telephone layout showing service entrance, telephone switchboard, strip boxes, telephone outlets and branch conduits as approved by the Telephone Co. Where public telephones are used for inter-communication, provide separate room and conduits for racks and automatic switching equipment as required by the Telephone Company.

(5) Nurses' call systems with outlets for beds,



duty stations, door signal lights, annunciators and wiring diagrams.

(6) Doctors' call and doctors' in-and-out systems with all equipment wiring, if provided.

(7) Fire alarm system with stations, gongs, control board and wiring diagrams.

(8) Emergency lighting system with outlets, transfer switch, source of supply, feeders and circuits.

(f) *Additions to existing projects.* (1) Procedures and requirements for working drawings and specifications to be followed and in addition the following information shall be submitted:

(i) Type of activities within the existing building and distribution of existing beds, etc.

(ii) Type of construction of existing building and number of stories high.

(iii) Plans and details showing attachment of new construction to the existing structure and mechanical systems.

(2) Specifications shall supplement the drawings and shall comply with the following:

(i) The specifications shall fully describe, except where fully indicated and described on the drawings, the materials, workmanship, the kind, sizes, capacities, finishes and other characteristics of all materials, products, articles and devices.

(ii) The specifications shall include:

(i) Cover or title sheet.

(ii) Index.

(iii) Invitation for bids.

(iv) General conditions.

(v) Wage schedule, section 2, Labor Standards and Kickback Regulations.

(vi) General requirements.

(vii) Sections describing materials and workmanship in detail for each class of work.

(viii) Form of bid bond.

(ix) Bid form.

(x) Form of agreement.

(xi) Performance and payment bond forms.

(iii) In order to obtain a standard procedure Standard Specification Forms will be furnished to the State Agency as a guide to the Architect.

(3) Estimates shall show in convenient form and detail the probable total cost of the work to be performed under the contract for construction of new buildings, expansion, remodeling and alteration of existing buildings including provision of fixed equipment contemplated by plans and specifications.

tion of new buildings, expansion, remodeling and alteration of existing buildings including provision of fixed equipment contemplated by plans and specifications.

### § 53.155 Equipment.

(a) *General.* Equipment necessary for the functioning of the facility as planned shall be provided in the kind and to the extent required to perform the desired service. The necessary equipment shall be included in the cost of the project and is considered an essential part of the project.

(b) *Definition of equipment.* The term "equipment" as used in this section means all items necessary for the functioning of all services of the facility, including such services as accounting and records, maintenance of buildings and grounds, laundry service, public waiting rooms, public health, and related services. The term "equipment" does not include items of current operating expense such as food, fuel, drugs, dressings, paper, printed forms, soap, and the like.

(c) *Classification of equipment.* All equipment shall be classified in three groups as indicated below; the basis of classification being the usual methods of purchasing the equipment and suggested accounting practices in regard to depreciation.

(1) *Group I: Built-in equipment usually included in construction contracts.* Hospital cabinets and counters, laboratory and pharmacy cabinets, X-ray darkroom equipment, cubicle curtain equipment, shades and venetian blinds and any other built-in equipment, including items which have been included previously under § 53.134 through 53.154, such as: Kitchen equipment, laundry chutes, elevators, dumbwaiters, boilers, incinerators, refrigerating equipment, sterilizing equipment, surgical lighting, dental units and chairs, autopsy tables and the like.

(2) *Group II: Depreciable equipment of five years' life or more normally purchased through other than construction contracts.* Large items of furniture and equipment having a reasonably fixed location in the building but capable

of being moved. Examples: Bedroom and office furniture, anesthesia apparatus, operating and obstetrical tables, radiographic and fluoroscopic units, basal metabolism apparatus and oxygen tents, dental amalgamators and casting machines, centrifuges, microscopes and balances, wheeled equipment and the like.

(3) *Group III: Non-depreciable equipment of less than five years' life normally purchased through other than construction contract.* Small items of low unit cost and suited to store-room control. Examples: Chinaware, silverware, kitchen utensils, waste baskets, bedpans, dressing jars, catheters, surgical instruments, bed linens, blankets, and the like.

(Sec. 215, 58 Stat. 690, as amended; 42 U.S.C. 210. Interpret or apply sec. 622, 60 Stat. 1042; 42 U.S.C. 291e)

(d) *Responsibility of applicant.* (1) It shall

be the responsibility of the applicant to select and purchase all necessary equipment for the complete functioning of all services included in the project in accordance with these standards and any further standards prescribed by the State Agency.

(2) It is essential that the equipment shall be properly apportioned and budgeted to the various services of the facility so that unduly expensive or elaborate equipment is not provided for some services of the project, necessitating the use of cheap and inadequate equipment for other services.

(3) As soon as possible after the award of the construction contract, the applicant shall submit to the Surgeon General through the State Agency for approval a complete list in triplicate of all proposed Groups II and III equipment, including itemized estimate of cost.



## HILL-BURTON PUBLICATIONS

An annotated bibliography, "Hill-Burton Publications," Public Health Service Publication No. 930-G-3, will be provided upon request. For a free single copy, write to: Division of Hospital and Medical Facilities, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C., 20201.

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